

Appendix B

Air Quality and Greenhouse Gas Emissions

Sunset and Western

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Technical Appendix for Air Quality and Greenhouse Gas Emissions

- Appendix B-1: Air Quality and Greenhouse Gas Methodology
- Appendix B-2: Air Quality Worksheets and Modeling Output Files
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Appendix B-1-Air Quality and Greenhouse Gas
Emissions Methodology

AIR QUALITY AND GREENHOUSE GAS EMISSIONS METHODOLOGY

5420 Sunset Project

Prepared by:

Eyestone Environmental, LLC

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5420 Sunset Project

Air Quality and Greenhouse Gas Emissions Methodology

1. Introduction

Eyestone Environmental has been retained to conduct a comprehensive greenhouse gas (GHG) and criteria air pollutant emissions assessment for the Sunset and Western Project (the “Project”). Emissions during both construction and operation of the Project were quantified. This assessment describes the methodology used to estimate the GHG and air pollutant emissions from existing and Project conditions and describes the methodology used to quantify GHG and air pollutant emission reductions from project design features and mitigation measures.

2. Air Pollutant and Greenhouse Gas Emissions Methodology

The Project would result in direct emissions of criteria pollutants and direct and indirect GHG emissions generated by different types of emissions sources, including:¹

- Direct Emissions:
 - Construction: emissions associated with demolition of existing uses, shoring, excavation, grading, and construction-related equipment and vehicular activity;
 - Area source: emissions associated with consumer products, architectural coatings, and landscape equipment;
 - Energy source (building operations): emissions associated with space heating and cooling, and water heating;

¹ Direct sources of emissions include Project-related vehicular trips and onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel). Whereas, indirect sources of emissions include offsite emissions associated with purchased electricity and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater)

- Mobile source: emissions associated with vehicles accessing the project site; and
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators).
- Indirect Emissions:
 - Energy source (building operations): emissions associated with energy consumption, and lighting;
 - Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
 - Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

a. Emission Inventories

Project-related construction and operation emissions were calculated using SCAQMD's recommended California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying criteria pollutant and GHG impacts from land use projects throughout California.²

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on-road emission model (EMission FAcT or model (EMFAC)) and off-road equipment emission model (Off-road Emissions Inventory Program model (OFFROAD)).

² See www.caleemod.com.

(1) Construction

Construction activities would generate emissions from off-road equipment usage, on-road vehicle travel (truck hauling, vendor deliveries, and workers commuting), architectural coating, and paving. Each of these source types is discussed in more detail below. The Project's construction emissions were calculated using the SCAQMD recommended CalEEMod (Version 2016.3.2). Please refer to CalEEMod construction output files for a complete listing of construction details modeled. CalEEMod default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths. It should be noted that the maximum daily emissions were predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum daily emissions were compared to the SCAQMD daily regional numeric indicators. Annual emissions were calculated based on the total number of hours each piece of equipment was used and the total number of vehicular trips (i.e., worker, vendor, and haul) over the duration of construction. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years.³ Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(a) Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel. Construction equipment emissions vary with engine model years in which newer equipment will emit fewer pollutants. As a conservative assumption, the CalEEMod model uses an emission rate for equipment which represents an average model year for available equipment within the Air Basin. CalEEMod calculates the exhaust emissions based on CARB OFFROAD methodology using the equation presented below.

Construction Off-Road Equipment:

$$\text{Emissions Diesel [lbs]} = \left(\sum_i (\text{EF}_i \times \text{Pop}_i \times \text{AvgHP}_i \times \text{Load}_i \times \text{Activity}_i) \right)$$

Where: EF_i = Emission factor from OFFROAD (lbs/hr)

Pop_i = Population (quantity of same equipment)

³ SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, 2008.

AvgHP_i = Maximum rated average horsepower (hp)

Load_i = Load Factor (dimensionless)

Activity_i = Hours of operation (hours)

i = Summation index

Fugitive dust emissions from use of off-road equipment were also calculated using CalEEMod based on the types of equipment used during grading activities and based on the amount of import/export from loading or unloading dirt into haul trucks. These methods have been adapted from USEPA's AP-42 method for Western Coal Mining. As recommended by SCAQMD, the fugitive dust emissions from the grading phase are calculated using the methodology described in USEPA AP-42. PM₁₀ and PM_{2.5} emissions from fugitive dust will be controlled by watering the construction site three times a day consistent with SCAQMD Rule 403 and were estimated to be reduced by 61 percent.

(b) Emissions from On-Road Trips

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker commuting, vendor deliveries, and trucks for soil and material hauling. These emissions are based on the number of trips and VMT along with emission factors from EMFAC. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC as follows:

Construction On-Road Equipment:

$\text{Emissions pollutant (lbs)} = \text{VMT} * \text{EF running, pollutant}$

Where: VMT = vehicle miles traveled (miles)

EF running,pollutant = emission factor for running emissions (lbs/VMT)

Evaporative emissions, starting and idling emissions in CalEEMod were calculated by multiplying the number of trips times the respective emission factor for each pollutant. Consistent with Mitigation Measure AIR-MM-1, off-road equipment would meet Tier 4 off-road emissions standards, where feasible, and the emission reduction was calculated within CalEEMod.

(c) Emissions from Architectural Coating

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings. CalEEMod calculates the VOC evaporative emissions from application of residential and non-residential surface coatings using the following equation:

Construction Architectural Coating Emissions:

$$\text{Emissions Architectural Coatings (lbs)} = \text{EF}_{\text{AC}} \times F \times A_{\text{paint}}$$

Where: EF_{AC} = Emission Factor (lb/sf)

A_{paint} = Building Surface Area (sf)

The CalEEMod tool assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage. All of the land use information provided by a metric other than square footage will be converted to square footage using the default conversions or user defined equivalence.

F = fraction of surface area [%].

The default values based on SCAQMD methods used in their coating rules are 75 percent for the interior surfaces and 25 percent for the exterior shell. Parking areas are based on 6-percent coverage.

The emission factor (EF) is based on the VOC content of the surface coatings and is calculated estimated using the equation below:

$$\text{EF}_{\text{AC}} = C_{\text{VOC}} / 454(\text{g/lb}) \times 3.785(\text{L/gal}) / 180(\text{sf})$$

Where: EF = emission factor (lb/sf)

C = VOC content (g/L or gram per liter)

The emission factors for coating categories were calculated using the equation above based on default VOC content from provided by the air districts or CARB's statewide limits in CalEEMod. Architectural coating VOC emission factors are also consistent with SCAQMD Rule 1113 as discussed above.

(d) Emissions from Paving

CalEEMod estimates VOC off-gassing emissions associated with asphalt paving of parking lots using the following equation:

$$\text{Emissions}_{\text{AP}} (\text{lbs}) = \text{EF}_{\text{AP}} \times A_{\text{parking}}$$

Where: EF = emission factor (lb/acre)

A = area of the parking lot (acre)

Note: The Sacramento Metropolitan Air Quality Management District (SMAQMD) default emission factor is 2.62 lb/acre.

(2) Operation

Similar to construction, the SCAQMD-recommended CalEEMod was used to calculate potential emissions generated by the Project, including area source, energy sources (electricity and natural gas), mobile source, stationary sources (emergency generator), solid waste generation and disposal, and water usage/wastewater generation.

(3) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes consumer products, architectural coatings, and landscape maintenance equipment. Pollutant emissions generated by the Project were calculated using CalEEMod defaults, based upon the land uses that will be included in each project.

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. SCAQMD did an evaluation of consumer product use compared to the total square footage of buildings using data from CARB consumer product Emission Inventory. To calculate the VOC emissions from consumer product use, the following equation was used in CalEEMod:

$$\text{Emissions Consumer Products (lbs)} = \text{EF}_{\text{CP}} \times \text{Building Area}$$

Where:

EF_{CP} = pounds of VOC per building square foot

The factor is 1.98×10^{-5} lbs/sf for SCAQMD areas.

Building Area = the total square footage of all buildings including residential square footage

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. The operational emission methodology from architecture coating is the same as the construction methodology discussed above. All land

use buildings are assumed to be repainted at a rate of 10 percent of area per year. This is based on the assumptions used by SCAQMD.

The combustion of fossil fuels to operate landscape equipment such as lawnmowers and trimmers, results in pollutant emissions. The emissions occur on-site and are considered a direct source of pollutant emissions. The emissions for landscaping equipment are based on the size of the land uses, the pollutant emission factors for fuel combustion. Pollutant emissions from landscaping equipment are generally calculated in CalEEMod as follows:

Landscaping Equipment:

$$\text{Landscaping Equipment Emissions [lbs]} = (\sum_i (\text{Units} \times \text{EF}_{\text{LE}} \times \text{A}_{\text{LE}})_i)$$

Where: Units = Number of land use units (same land use type) [1,000 sf]

EF_{LE} = Emission factor [grams (g)/1,000 sfday]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(4) Energy Emissions (Electricity and Natural Gas)

Pollutant emissions are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits pollutant emissions directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. Pollutant emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Energy demand emissions were calculated using the CalEEMod emissions inventory model. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 Building Energy Efficiency Standards (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod energy demand is based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) study.⁴ The data is specific for climate zones and, therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. CalEEMod currently assumes 2016 Title 24 Energy Efficiency Standards when calculating project energy usage. In order to account for 2019 Title 24 Energy Efficiency Standards, energy consumption was assumed to be 10 percent more efficient than the 2016 Building Energy Efficiency Standards requirements.

(a) Electricity

Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. In contrast, GHG emissions from power plants are not subject to stationary source permitting requirements to the same degree as criteria pollutants. As such, GHGs emitted by power plants may be indirectly attributed to individual buildings and electricity users, who have the greatest ability to decrease usage by applying mitigation measures to individual electricity “end uses.” CalEEMod therefore calculates GHG emissions (but not criteria pollutant emissions) from regional power plants associated with building electricity use.

Emissions associated with electricity demand are based on the size of the residential, commercial and retail land uses, the electrical demand factors for the land uses, the emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual electricity GHG emissions in units of MTCO₂e are calculated as follows:

⁴ CEC, *Commercial End-Use Survey*, March 2006.

Electricity:

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_E \times EF_E \times \text{GWP})_i) \div 2,204.62$$

Where: Units = Number of land use units (same land use type) [1,000 sf]
 D_E = Electrical demand factor [megawatt-hour (MWh)/1,000 sf/yr]
 EF_E = GHG emission factor [pounds per megawatt-hour (MWh)]
 GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]
 2,204.62 = Conversion factor [pounds/MT]
 i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

GHG emissions from electricity use are directly dependent on the electricity utility provider. The Los Angeles Department of Water and Power (LADWP) provides electric service to the Project Site. Thus, GHG intensity factors for LADWP were selected in CalEEMod. Intensity factors for GHGs due to electrical generation to serve the electrical demands of the existing condition were obtained from the LADWP 2017 Power Integrated Resource Plan, which provides a CO_2 intensity of 801 pounds of CO_2 per MWh for 2019. By 2030, at least 50 percent of electricity shall be obtained from renewable sources. The 2016 Power Integrated Resource Plan estimates that the LADWP CO_2 intensity would be 500 pounds of CO_2 per MWh by Year 2026.⁵ As year-by-year data is currently not available, the CO_2 intensity factor for the Project buildout was determined based on straight line interpolation based on current and Year 2026 data points (801 pounds of CO_2 per MWh for Year 2019 and 647 pounds of CO_2 per MWh for Year 2024).

(b) Natural Gas

The direct source emissions associated with natural gas combustion are based on the size of the land uses and the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu). Natural gas emissions are calculated in CalEEMod as follows:

⁵ 2016 Final Power Integrated Resource Plan, Figure 4-7. LADWP. December 2016.

Natural Gas:

$$\text{Natural Gas Emissions (lbs)} = (\sum_i (\text{Units} \times D_{\text{NG}} \times EF_{\text{NG}})_i)$$

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{NG} = Natural Gas combustion factor [MMBtu/1,000 sf]

EF_{NG} = Natural Gas combustion factor [pounds/MMBtu]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(5) Mobile Source Emissions

Mobile-source emissions were calculated using the CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and vehicle miles traveled (VMT). The Traffic Study prepared by Gibson Transportation Consulting had calculated Project VMT which was entered into CalEEMod in calculating Project mobile source emissions.

Modeling was also conducted using the Los Angeles County vehicle fleet mix for all vehicle types as provided in EMFAC2014.

Mobile source emissions were generally calculated in CalEEMod as follows:

Mobile:

$$\text{Mobile Emissions [lbs]} = (\sum_i (\text{Units} \times \text{ADT} \times D_{\text{TRIP}} \times EF_i))$$

Where: Units = Number of vehicles (same vehicle model year and class)

ADT = Average daily trip rate [trips/day]

D_{TRIP} = Trip distance [miles/trip]

EF = Pollutant emission factor [pounds per mile]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

Mobile source operational emissions were calculated based on the Project VMT estimates provided by Gibson Transportation Consulting.⁶ As discussed in Section IV.I, Transportation, of this Draft EIR, to calculate peak daily trip estimates, the Los Angeles Department of Transportation (LADOT) VMT Calculator was used.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.⁷ The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites.

The Project design includes characteristics that would reduce trips and VMT as compared to a standard project within the air basin as measured by the air quality model (CalEEMod). While these Project characteristics primarily reduce greenhouse gas emissions, they would also reduce criteria air pollutants discussed herein. These relative reductions in vehicle trips and VMT from a standard project within the air basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project in any infill, HQTa area that promotes alternative modes of transportation.

(6) Stationary Source (Emergency Generator Emissions)

Emissions of GHGs associated with use of emergency generators were calculated using CalEEMod, in which emission factors are based on Table 3.4-1 (Gaseous Emission Factors for Large Stationary Diesel Engines) from EPA's AP-42: Compilation of Air Pollutant Emission Factors. The emissions are based on the horsepower rating of the diesel generator and the number of hours operated per year for testing purposes. Annual emergency generator GHG emissions in units of MTCO_{2e} were calculated as follows:

⁶ *CEQA Thresholds Analysis for the Sunset and Western Project.* Gibson Transportation Consulting, March 2020

⁷ *Environmental Protection Agency, Mixed-Use Trip Generation Model.* www.epa.gov/smartgrowth/mixed-use-trip-generation-model. Accessed December 16, 2019.

Emergency Generator:

$$\text{Emissions [lbs]} = (\text{Total HP} \times \text{LF} \times \text{HR} \times \text{EF})$$

Where: Total HP = Total horsepower of emergency generators (Hp)

LF = Load Factor (CalEEMod default of 0.73)

HR = Hours Operated per Year

EF = AP-42 Emission Factor of 1.16 lb/hp-hr)

(7) Solid Waste Emissions

The generation of municipal solid waste (MSW) from day-to-day operational activities generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills results in GHG emissions of CO₂ and CH₄ from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the retail and restaurant land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of MTCO₂e were calculated in CalEEMod as follows:

Solid Waste:

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_{\text{MSW}} \times EF_{\text{MSW}} \times \text{GWP})_i) \div 1.1023$$

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{MSW} = Waste disposal rate [tons/1,000 sf/yr]

EF_{MSW} = GHG emission factor [tons/ton waste]

GWP = Global warming potential [CO₂ = 1, CH₄ = 21, N₂O = 310]

1.1023 = Conversion factor [tons/MT]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. CalEEMod default annual solid waste disposal rates used. The GHG emission factors, particularly for CH₄, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this assessment. The Project includes a 76.4-percent recycling/diversion rate currently achieved within the City.⁸

(8) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water and include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod default annual water demand and wastewater rates were used. GHG emissions due to electricity are calculated in CalEEMod as follows for indoor and outdoor water demand:

⁸ City of Los Angeles, *Sustainable City pLAN, Waste & Landfills*, <http://plan.lamayor.org/portfolio/waste-landfills-3rd>, accessed February 21, 2019.

Water Supply, Treatment, and Distribution; Wastewater Treatment (electricity):

$$\text{Annual Emissions [MTCO}_2\text{e]} = (\sum_i (\text{Units} \times D_W \times (EI_W \div 1,000) \times EF_W \times GWP)_i) \div 2,204.62$$

Where: Units	= Number of land use units (same land use type) [1,000 sf]
D_W	= Water demand factor [million gallons (Mgal)/1,000 sf/yr]
EI_W	= Electricity intensity factor [kilowatt-hours (kWh)/Mgal]
1,000	= Conversion factor [kWh/MWh]
EF_W	= GHG emission factor [pounds/MWh]
GWP	= Global warming potential [$\text{CO}_2 = 1$, $\text{CH}_4 = 21$, $\text{N}_2\text{O} = 310$]
2,205	= Conversion factor [pounds/MT]
i	= Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod provides options to account for the use of water saving features such as the use of low-flow water fixtures (e.g., low-flow faucets, low-flow toilets). The same electricity GHG emissions factors discussed above were used for water and wastewater energy usage. In addition, the calculation of Project GHG emissions from water/wastewater usage accounts for a 20 percent reduction in water/wastewater emissions with implementation of Project Design Features WAT-PDF-1 provided in Section IV.J, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.

b. Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.⁹ Even though these studies did not provide an exact

⁹ *Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of* (Footnote continued on next page)

regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require the State board to ensure that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan outlined in SB 32 involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. An evaluation was provided to determine whether the Project's design features advanced these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency and reducing water usage.

Further, an evaluation of the Project's consistency with SCAG's RTP/SCS was provided to demonstrate that the Project will be consistent with post-2020 GHG reduction goals. The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita GHG emissions by 2020, 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035, and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016–2040 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.

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Appendix B-2

Air Quality Worksheets and Modeling Output Files

- Appendix B-2.1: Construction Emissions Inventory (Daily Emissions)
 - CalEEMod Outputs – Construction (Regional and Localized)
 - Regional
 - Onsite
 - Localized Significance Threshold (LST) Calculation Worksheet
- Appendix B-2.2: Operational Emissions Inventory
 - CalEEMod Output Summary
 - CalEEMod Outputs – Operations (Baseline and Project)
 - Baseline (Existing)
 - Baseline (Buildout Year)
 - Buildout

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AQ SUMMARY OF EMISSIONS													
Construction Emissions (Unmitigated)							Construction Emissions (With Mitigation Measures)						
Regional (Daily) Unmitigated	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Regional (Daily) w/MMs	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2022							2022						
Onsite	3	31	29	0	4	3	Onsite (Tier 4 Grading Equip)	<1	4	38	<1	3	1
Offsite	3	103	28	0	10	3	Offsite (2007 Export Trucks)	2	66	9	<1	<1	<1
							Vendor	<1	<1	<1	<1	<1	<1
							Worker	<1	<1	2	<1	<1	<1
Total 2022:	7	134	58	0	14	6	Total 2022:	3	71	49	<1	4	2
2023	5	97	55	0	46	13	2023	5	97	55	<1	46	13
2024	8	43	78	0	15	5	2024	8	43	78	<1	15	5
2025	31	41	76	0	14	5	2025	31	41	76	<1	14	5
2026	28	21	49	<1	12	4	2026	28	21	49	<1	12	4
2027	<1	<1	<1	<1	<1	<1	2027	<1	<1	<1	<1	<1	<1
2028	<1	<1	<1	<1	<1	<1	2028	<1	<1	<1	<1	<1	<1
MAX	31	134	78	<1	46	13	MAX	31	97	78	<1	46	13
Threshold	75	100	550	150	150	55	Threshold	75	100	550	150	150	55
Difference	(44)	34	(472)	(150)	(104)	(42)	Difference	(44)	(3)	(472)	(150)	(104)	(42)
Impact	No	Yes	No	No	No	No	Impact	No	No	No	No	No	No
							Percent Reduction:	0%	-28%	0%	-4%	0%	0%
Localized (Daily) Unmitigated	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Localized (Daily) w/MMs	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2022							2022						
Onsite (Equipment)		31	29		4	3	Onsite (Tier 4 Grading Equip)		4	38		<1	<1
Onsite (Vehicles)		2	<1		<1	<1	Offsite (2007 Export Trucks)		4	3		<1	<1
							Vendor		<1	<1		<1	<1
							Worker		<1	<1		<1	<1
Total 2022:		33	30		4	3	Total 2022:		9	41		<1	<1
2023		77	42		4	3	2023		77	42		4	3
2024		38	51		2	1	2024		38	51		2	1
2025		36	50		1	1	2025		36	50		1	1
2026		18	27		<1	<1	2026		18	27		<1	<1
2027		<1	<1		<1	<1	2027		<1	<1		<1	<1
2028		<1	<1		<1	<1	2028		<1	<1		<1	<1
MAX		77	51		4	3	MAX		77	51		4	3
Threshold		107	1,861		16	8	Threshold		107	1,861		16	8
Difference		(30)	(1,810)		(12)	(5)	Difference		(30)	(1,810)		(12)	(5)
Impact		No	No		No	No	Impact		No	No		No	No
							Percent Reduction:		0%	0%		0%	-1%
Operation Emissions (Without Mitigation Measures)							Operation Emissions (With Mitigation Measures)						
Regional Baseline (Existing Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Regional Baseline (Existing Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	2	<1	<1	<1	<1	<1	Area	2	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1	Energy	<1	<1	<1	<1	<1	<1
Mobile	27	105	258	<1	43	12	Mobile	27	105	258	<1	43	12
Emergency Generator	<1	<1	<1	<1	<1	<1	Emergency Generator	<1	<1	<1	<1	<1	<1
Total	29	106	258	<1	43	12	Total	29	106	258	<1	43	12
Regional Baseline (Buildout Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Regional Baseline (Buildout Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	2	<1	<1	<1	<1	<1	Area	2	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1	Energy	<1	<1	<1	<1	<1	<1
Mobile	14	63	123	<1	43	12	Mobile	14	63	123	<1	43	12
Emergency Generator	<1	<1	<1	<1	<1	<1	Emergency Generator	<1	<1	<1	<1	<1	<1
Total	16	64	124	<1	43	12	Total	16	64	124	<1	43	12
Regional Buildout (Buildout Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Regional Buildout (Buildout Year)	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	22	12	65	<1	1	1	Area	22	12	65	<1	1	1
Energy	<1	2	1	<1	<1	<1	Energy	<1	2	1	<1	<1	<1
Mobile	17	78	166	<1	61	17	Mobile	17	78	166	<1	61	17
Emergency Generator	<1	<1	1	<1	<1	<1	Emergency Generator	<1	<1	1	<1	<1	<1
Total	40	92	234	<1	63	18	Total	40	92	234	<1	63	18
Project Regional (Buildout Less Baseline (Buildout Year))	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Project Regional (Buildout Less Baseline (Buildout Year))	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	21	12	65	<1	1	1	Area	21	12	65	<1	1	1
Energy	<1	1	<1	<1	<1	<1	Energy	<1	1	<1	<1	<1	<1
Mobile	3	15	42	<1	19	5	Mobile	3	15	42	<1	19	5
Emergency Generator	<1	<1	1	<1	<1	<1	Emergency Generator	<1	<1	1	<1	<1	<1
Total	24	28	110	<1	20	6	Total	24	28	110	<1	20	6
Threshold	55	55	550	150	150	55	Threshold	55	55	550	150	150	55
Difference	(31)	(27)	(440)	(150)	(130)	(49)	Difference	(31)	(27)	(440)	(150)	(130)	(49)
Impact	No	No	No	No	No	No	Impact	No	No	No	No	No	No
Project Localized (Buildout Less Baseline (Buildout Year))							Project Localized (Buildout Less Baseline (Buildout Year))						
Onsite Total		13	67		1	1.3	Onsite Total		13	67		1	1.3
Threshold		107	1861		4	2.0	Threshold		107	1861		4	2.0
Difference		(94)	(1794)		(3)	(1)	Difference		(94)	(1794)		(3)	(1)
Impact		No	No		No	No	Impact		No	No		No	No

Sunset Western

Heavy Duty Diesel Truck Emissions Calculations

Construction Year **2022**

Truck Model Year **2007**

Run Emissions

Trips per Day	360					
Trip Length (mi.)	25					
Daily VMT	9000					
	TOG_RUNEX	CO_RUNEX	NOx_RUNEX	PM10_RUNEX	PM2_5_RUNEX	SOx_RUNEX
Run Emission Factors (g/mi) ¹	0.068	0.289	3.071	0.024	0.023	0.013
Run Emissions (lbs/day)	1.36	5.73	60.93	0.48	0.46	0.26
On-site Emissions (lbs/day)	0.01	0.06	0.61	0.00	0.00	0.00

Idle Emissions

Loads per Day	180					
Idle Time Per Truck (min.)	15					
Daily Idle Time (hrs)	45.00					
	TOG	CO	NOx	PM10	PM2_5	SOx
Idle Emission Factors (g/hr) ²	2.70	32.10	32.49	0.02	0.02	0.06
Idle Emissions (lbs/day)	0.27	3.18	3.22	0.00	0.00	0.01

Start Emissions

Trucks per Day	45					
Cold Starts per Day	1					
Warm Starts per Day	5					
	TOG	CO	NOx	PM10	PM2_5	SOx
Cold Start Emission Factors (g/start) ²	0	0	14.93	0	0	0
Warm Start Emission Factors (g/start) ²	0	0	0.55	0	0	0
Start Emissions (lbs/day)	0.000	0.000	1.755	0.000	0.000	0.000

Brake and Tire Wear

	PM10_TW	PM10_BW	PM2.5_TW	PM2.5_BW		
Brake and Tire Wear Emission Factors (g/mi) ¹	0.035	0.061	0.009	0.026		
Run Emissions (lbs/day)	0.70	1.21	0.18	0.52		
On-site Emissions (lbs/day)	0.00	0.00	0.00	0.00		

Reentrained Road Dust

	PM10	PM2.5				
Reentrained Dust Emission Factors (g/mi) ³	0.294	0.073				
Run Emissions (lbs/day)	5.83	1.46				
On-site Emissions (lbs/day)	0.06	0.01				
	TOG	CO	NOx	PM10	PM2_5	SOx
Total Emissions (Run + Idle + Start)	1.63	8.92	65.91	0.55	0.48	0.27
On-site Emissions (Run 0.25 mi + Idle)	0.28	3.24	3.83	0.07	0.02	0.01

¹ EMFAC2017 Web Database - Los Angeles County, EMFAC2007 Categories, HHDT

² EMFAC2017 Project Level (PL) v. 1.0.2 - Los Angeles County, EMFAC2007 Categories, HHDT

Step 1. Determine Allowable Increase using 98th percentile NO2 and Max NO2 data**Central LA NO2 Monitoring Data**

SRA	City	Design Value	98th percentile, ppb		
		2014-2016	2016	2017	2018
1	Central LA	60	61	62	57
SRA	City	Design Value	Max Hourly, ppb		
		2006-2008	2016	2017	2018
1	Central LA	120	65	81	70

Threshold (ppb) Allowable Increase (ppb)

100 40

Threshold (ppb) Allowable Increase (ppb)

180 60

Max Hourly vs. 98th Percentile Ratio (Allowable Increase)	67%
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Step 2. Use ratio in Step 1 to determine LST lookup value. Extrapolate/Interpolate LST look-up value for project area**LST Threshold (SRA 1, 25 meter receptor)**

Project Size (acres)	NO2 (lbs/day)	98th Percentile NO2 (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 Ops (lbs/day)	PM2.5 Ops (lbs/day)
5	161	107	1861	16	8	4	2

Sunset and Western Construction (Regional) - South Coast Air Basin, Winter

Sunset and Western Construction (Regional)

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,419.00	Space	0.00	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	6.75	787,250.00	2102
Strip Mall	36.00	1000sqft	0.83	36,000.00	0
Supermarket	59.10	1000sqft	0.00	59,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - see assumptions

Construction Phase - Project Specific Construction Schedule (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment -

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Trips and VMT - Project Specific Construction Trips (See AQ Appendix)

Demolition -

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier IV Offroad Equipment for Grading/Excavation Phase.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	154.00

tblConstructionPhase	NumDays	230.00	19.00
tblConstructionPhase	NumDays	230.00	178.00
tblConstructionPhase	NumDays	230.00	522.00
tblConstructionPhase	NumDays	230.00	433.00
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	20.00	65.00
tblGrading	MaterialExported	0.00	380,000.00
tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblLandUse	LotAcreage	12.77	0.00
tblLandUse	LotAcreage	11.85	6.75
tblLandUse	LotAcreage	1.36	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	1,400.00	2,200.00
tblTripsAndVMT	HaulingTripNumber	47,500.00	55,440.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	187.00	700.00
tblTripsAndVMT	VendorTripNumber	187.00	400.00
tblTripsAndVMT	VendorTripNumber	187.00	110.00
tblTripsAndVMT	VendorTripNumber	187.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	23.00	100.00
tblTripsAndVMT	WorkerTripNumber	28.00	64.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	1,000.00
tblTripsAndVMT	WorkerTripNumber	160.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	6.8111	133.7002	57.5050	0.4015	15.9828	1.7333	17.7161	5.9700	1.6356	7.6056						
2023	5.3788	96.5688	54.5516	0.3872	48.8246	1.3389	50.1634	14.0311	1.3002	15.2931						
2024	8.4377	42.7369	77.8605	0.2096	13.2552	1.3935	14.6487	3.5371	1.3582	4.8953						
2025	30.8574	40.8810	75.5657	0.2053	13.2552	1.2031	14.4584	3.5371	1.1718	4.7089						
2026	28.3241	20.5489	48.5554	0.1362	11.7083	0.7680	12.4763	3.1121	0.7287	3.8407						
Maximum	30.8574	133.7002	77.8605	0.4015	48.8246	1.7333	50.1634	14.0311	1.6356	15.2931						

Mitigated Construction

[illegible]

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	8.23	16.41	-5.10	0.00	7.46	34.57	9.69	13.55	34.65	18.85	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2022	6/30/2022	5	44	
2	Grading	Grading	7/1/2022	2/1/2023	5	154	
3	Mat Foundation	Building Construction	2/2/2023	2/28/2023	5	19	
4	Concrete - Foundation to Grade	Building Construction	3/1/2023	11/3/2023	5	178	
5	Building Construction - Structure, Shell, Exterior	Building Construction	11/4/2023	11/4/2025	5	522	
6	Building Construction - Finishing	Building Construction	9/4/2024	5/1/2026	5	433	
7	Architectural Coating	Architectural Coating	5/4/2025	5/4/2026	5	261	
8	Paving	Paving	2/1/2026	5/1/2026	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,594,181; Residential Outdoor: 531,394; Non-Residential Indoor: 142,650; Non-Residential Outdoor: 47,550; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36

Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	2	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29
Grading	Excavators	3	8.00	158	0.38
Grading	Generator Sets	1	8.00	84	0.74
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Pumps	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	1	8.00	84	0.74
Mat Foundation	Plate Compactors	5	12.00	8	0.43
Mat Foundation	Pumps	5	12.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	0	8.00	46	0.45
Concrete - Foundation to Grade	Cranes	0	7.00	231	0.29
Concrete - Foundation to Grade	Forklifts	3	8.00	89	0.20
Concrete - Foundation to Grade	Generator Sets	1	8.00	84	0.74
Concrete - Foundation to Grade	Plate Compactors	2	8.00	8	0.43
Concrete - Foundation to Grade	Pumps	2	8.00	84	0.74
Concrete - Foundation to Grade	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete - Foundation to Grade	Welders	1	8.00	46	0.45
Building Construction - Structure, Shell, Exterior	Aerial Lifts	3	8.00	63	0.31
Building Construction - Structure, Shell, Exterior	Air Compressors	3	8.00	78	0.48
Building Construction - Structure, Shell, Exterior	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction - Structure, Shell, Exterior	Concrete/Industrial Saws	1	8.00	81	0.73

Building Construction - Structure, Shell, Exterior	Cranes	0	7.00	231	0.29
Building Construction - Structure, Shell, Exterior	Forklifts	3	8.00	89	0.20
Building Construction - Structure, Shell, Exterior	Generator Sets	1	8.00	84	0.74
Building Construction - Structure, Shell, Exterior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Structure, Shell, Exterior	Welders	3	8.00	46	0.45
Building Construction - Finishing	Aerial Lifts	4	8.00	63	0.31
Building Construction - Finishing	Air Compressors	4	8.00	78	0.48
Building Construction - Finishing	Cranes	0	7.00	231	0.29
Building Construction - Finishing	Forklifts	0	8.00	89	0.20
Building Construction - Finishing	Generator Sets	0	8.00	84	0.74
Building Construction - Finishing	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction - Finishing	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	0	6.00	78	0.48
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	9	100.00	0.00	2,200.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Grading	11	64.00	10.00	55,440.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Mat Foundation	11	100.00	700.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Concrete - Foundation to Grade	9	100.00	400.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Building Construction - Structure, Shell	17	100.00	110.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Finishing	8	1,000.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Mitigation only applies to grading activities.

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8876	0.0000	6.8876	1.0428	0.0000	1.0428						0.0000
Off-Road	1.8769	17.5420	22.2503	0.0393		0.8349	0.8349		0.7919	0.7919				0.8893		3,796.0782
Total	1.8769	17.5420	22.2503	0.0393	6.8876	0.8349	7.7225	1.0428	0.7919	1.8347				0.8893		3,796.0782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4427	14.0923	3.5863	0.0454	1.0914	0.0439	1.1352	0.2990	0.0420	0.3410				0.3518		4,945.0734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.4338	0.2708	3.1374	0.0100	1.1178	8.0400e-003	1.1258	0.2964	7.4000e-003	0.3038				0.0252		1,001.6093
Total	0.8765	14.3631	6.7237	0.0554	2.2091	0.0519	2.2610	0.5955	0.0494	0.6448				0.3770		5,946.6827

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6862	0.0000	2.6862	0.4067	0.0000	0.4067						0.0000

3.3 Grading - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3011	0.0000	6.3011	3.3525	0.0000	3.3525						0.0000
Off-Road	3.3182	31.1555	29.4307	0.0659		1.4106	1.4106		1.3271	1.3271				1.6589		6,357.6351
Total	3.3182	31.1555	29.4307	0.0659	6.3011	1.4106	7.7117	3.3525	1.3271	4.6795				1.6589		6,357.6351

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.1876	101.4646	25.8215	0.3267	8.9023	0.3158	9.2181	2.4093	0.3021	2.7115				2.5329		35,604.5283

Vendor	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201				0.0173		261.4537
Worker	0.2776	0.1733	2.0079	6.4300e-003	0.7154	5.1400e-003	0.7205	0.1897	4.7400e-003	0.1945				0.0161		641.0300
Total	3.4929	102.5447	28.0743	0.3356	9.6817	0.3227	10.0044	2.6175	0.3085	2.9260				2.5663		36,507.0120

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4574	0.0000	2.4574	1.3075	0.0000	1.3075						0.0000
Off-Road	0.7478	4.1647	37.5104	0.0659		0.0908	0.0908		0.0908	0.0908				1.6589		6,357.6351
Total	0.7478	4.1647	37.5104	0.0659	2.4574	0.0908	2.5482	1.3075	0.0908	1.3983				1.6589		6,357.6351

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	Calculated via spreadsheet methodology to account for use of MM (Onroad Haul Trucks meeting 2007 standards).															
Vendor	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201				0.0173		261.4537
Worker	0.2776	0.1733	2.0079	6.4300e-003	0.7154	5.1400e-003	0.7205	0.1897	4.7400e-003	0.1945				0.0161		641.0300
Total	3.4929	102.5447	28.0743	0.3356	9.6817	0.3227	10.0044	2.6175	0.3085	2.9260				2.5663		36,507.0120

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3011	0.0000	6.3011	3.3525	0.0000	3.3525						0.0000
Off-Road	3.0076	27.4161	28.8530	0.0660		1.2027	1.2027		1.1320	1.1320				1.6525		6,361.3675
Total	3.0076	27.4161	28.8530	0.0660	6.3011	1.2027	7.5039	3.3525	1.1320	4.4844				1.6525		6,361.3675

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0888	63.4693	23.2782	0.3127	41.7441	0.1303	41.8744	10.4705	0.1247	10.5952				2.3620		34,152.5202
Vendor	0.0206	0.6821	0.2171	2.3600e-003	0.0640	8.3000e-004	0.0648	0.0184	7.9000e-004	0.0192				0.0152		253.4091
Worker	0.2618	0.1568	1.8507	6.1900e-003	0.7154	5.0100e-003	0.7204	0.1897	4.6100e-003	0.1943				0.0145		617.1268
Total	2.3712	64.3081	25.3461	0.3212	42.5234	0.1362	42.6596	10.6786	0.1301	10.8087				2.3917		35,023.0561

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4574	0.0000	2.4574	1.3075	0.0000	1.3075						0.0000
Off-Road	0.7523	4.1732	37.5139	0.0660		0.0926	0.0926		0.0926	0.0926				1.6525		6,361.3675
Total	0.7523	4.1732	37.5139	0.0660	2.4574	0.0926	2.5500	1.3075	0.0926	1.4000				1.6525		6,361.3675

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	Calculated via spreadsheet methodolgy to account for use of MM (Onroad Haul Trucks meeting 2007 standards).															
Vendor	0.0206	0.6821	0.2171	2.3600e-003	0.0640	8.3000e-004	0.0648	0.0184	7.9000e-004	0.0192				0.0152		253.4091
Worker	0.2618	0.1568	1.8507	6.1900e-003	0.7154	5.0100e-003	0.7204	0.1897	4.6100e-003	0.1943				0.0145		617.1268
Total	2.3712	64.3081	25.3461	0.3212	42.5234	0.1362	42.6596	10.6786	0.1301	10.8087				2.3917		35,023.0561

3.4 Mat Foundation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0651	25.2467	33.1875	0.0596		1.2129	1.2129		1.2129	1.2129				0.2680		5,561.0902

Total	3.0651	25.2467	33.1875	0.0596		1.2129	1.2129		1.2129	1.2129				0.2680		5,561.0902
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	1.6986	71.0772	18.4724	0.2106	4.2277	0.0837	4.3114	1.1593	0.0801	1.2394				1.9897		22,997.8779
Worker	0.4091	0.2449	2.8917	9.6700e-003	1.1178	7.8300e-003	1.1256	0.2964	7.2100e-003	0.3036				0.0227		964.2607
Total	2.1077	71.3221	21.3641	0.2202	5.3455	0.0915	5.4370	1.4557	0.0873	1.5430				2.0124		23,962.1386

3.5 Concrete - Foundation to Grade - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6038	13.0234	16.6532	0.0279		0.6505	0.6505		0.6363	0.6363				0.2578		2,596.0787
Total	1.6038	13.0234	16.6532	0.0279		0.6505	0.6505		0.6363	0.6363				0.2578		2,596.0787

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.9707	40.6156	10.5556	0.1203	2.4158	0.0478	2.4637	0.6625	0.0458	0.7082				1.1370		13,141.6445
Worker	0.4091	0.2449	2.8917	9.6700e-003	1.1178	7.8300e-003	1.1256	0.2964	7.2100e-003	0.3036				0.0227		964.2607
Total	1.3798	40.8605	13.4474	0.1300	3.5336	0.0557	3.5893	0.9589	0.0530	1.0119				1.1597		14,105.9052

3.6 Building Construction - Structure, Shell, Exterior - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9426	22.6917	31.0864	0.0490		1.0767	1.0767		1.0481	1.0481				0.6936		4,566.8869
Total	2.9426	22.6917	31.0864	0.0490		1.0767	1.0767		1.0481	1.0481				0.6936		4,566.8869

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000		0.0000
Vendor	0.2266	7.5026	2.3883	0.0260	0.7039	9.0800e-003	0.7129	0.2026	8.6800e-003	0.2113			0.1668		2,787.5001
Worker	0.4091	0.2449	2.8917	9.6700e-003	1.1178	7.8300e-003	1.1256	0.2964	7.2100e-003	0.3036			0.0227		964.2607
Total	0.6357	7.7475	5.2800	0.0356	1.8216	0.0169	1.8385	0.4991	0.0159	0.5149			0.1895		3,751.7608

3.6 Building Construction - Structure, Shell, Exterior - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7615	21.4704	31.0214	0.0490		0.9350	0.9350		0.9099	0.9099				0.6821		4,566.9799
Total	2.7615	21.4704	31.0214	0.0490		0.9350	0.9350		0.9099	0.9099				0.6821		4,566.9799

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.2215	7.4850	2.3203	0.0259	0.7039	8.9300e-003	0.7128	0.2026	8.5400e-003	0.2112				0.1642		2,777.7770

Worker	0.3883	0.2231	2.6955	9.3400e-003	1.1178	7.7200e-003	1.1255	0.2964	7.1100e-003	0.3035				0.0208		932.3625
Total	0.6098	7.7081	5.0158	0.0352	1.8216	0.0167	1.8383	0.4991	0.0157	0.5147				0.1850		3,710.1395

3.6 Building Construction - Structure, Shell, Exterior - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5901	20.3281	30.9378	0.0490		0.7976	0.7976		0.7763	0.7763				0.6717		4,567.2979
Total	2.5901	20.3281	30.9378	0.0490		0.7976	0.7976		0.7763	0.7763				0.6717		4,567.2979

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.2158	7.4199	2.2614	0.0257	0.7039	8.7600e-003	0.7126	0.2026	8.3800e-003	0.2110				0.1616		2,762.7263
Worker	0.3700	0.2040	2.5029	8.9700e-003	1.1178	7.5700e-003	1.1253	0.2964	6.9700e-003	0.3034				0.0190		895.6500
Total	0.5858	7.6239	4.7642	0.0347	1.8216	0.0163	1.8380	0.4991	0.0154	0.5144				0.1806		3,658.3762

3.7 Building Construction - Finishing - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1025	8.6054	14.0252	0.0226		0.3614	0.3614		0.3585	0.3585				0.2949		2,158.9082
Total	1.1025	8.6054	14.0252	0.0226		0.3614	0.3614		0.3585	0.3585				0.2949		2,158.9082

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0806	2.7218	0.8438	9.4000e-003	0.2560	3.2500e-003	0.2592	0.0737	3.1100e-003	0.0768				0.0597		1,010.1007
Worker	3.8833	2.2312	26.9545	0.0934	11.1776	0.0772	11.2549	2.9644	0.0711	3.0354				0.2080		9,323.6254
Total	3.9639	4.9530	27.7983	0.1028	11.4336	0.0805	11.5141	3.0380	0.0742	3.1122				0.2677		10,333.7261

3.7 Building Construction - Finishing - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421
Total	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0785	2.6981	0.8223	9.3400e-003	0.2560	3.1900e-003	0.2591	0.0737	3.0500e-003	0.0767				0.0588		1,004.6277
Worker	3.6995	2.0401	25.0285	0.0898	11.1776	0.0757	11.2534	2.9644	0.0697	3.0341				0.1895		8,956.4996
Total	3.7780	4.7382	25.8509	0.0991	11.4336	0.0789	11.5125	3.0380	0.0728	3.1108				0.2483		9,961.1274

3.7 Building Construction - Finishing - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421

Total	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0767	2.6727	0.8057	9.2900e-003	0.2560	3.1200e-003	0.2591	0.0737	2.9800e-003	0.0767				0.0578		999.3589
Worker	3.5414	1.8780	23.3877	0.0866	11.1776	0.0732	11.2509	2.9644	0.0674	3.0318				0.1736		8,639.0764
Total	3.6181	4.5507	24.1934	0.0959	11.4336	0.0764	11.5099	3.0380	0.0704	3.1084				0.2314		9,638.4353

3.8 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8561					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000
Total	22.8561	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000

3.8 Architectural Coating - 2026**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8561					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000
Total	22.8561	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000

3.9 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7164	7.2352	9.7203	0.0142		0.3792	0.3792		0.3489	0.3489				0.4452		1,387.8055
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	0.7164	7.2352	9.7203	0.0142		0.3792	0.3792		0.3489	0.3489				0.4452		1,387.8055

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0153	0.5346	0.1612	1.8600e-003	0.0512	6.2000e-004	0.0518	0.0147	6.0000e-004	0.0153				0.0116		199.8718

Worker	0.0708	0.0376	0.4678	1.7300e-003	0.2236	1.4600e-003	0.2250	0.0593	1.3500e-003	0.0606				3.4700e-003		172.7815
Total	0.0862	0.5721	0.6289	3.5900e-003	0.2747	2.0800e-003	0.2768	0.0740	1.9500e-003	0.0760				0.0150		372.6533

Sunset and Western Construction (Localized) - South Coast Air Basin, Winter

Sunset and Western Construction (Localized)
South Coast Air Basin, Winter

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,419.00	Space	0.00	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	6.75	787,250.00	2102
Strip Mall	36.00	1000sqft	0.83	36,000.00	0
Supermarket	59.10	1000sqft	0.00	59,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - see assumptions

Construction Phase - Project Specific Construction Schedule (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment -

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Trips and VMT - Project Specific Construction Trips (See AQ Appendix) Onsite activity (0.25 miles)

Demolition -

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier IV Offroad Equipment for Grading/Excavation Phase.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	230.00	19.00

tblConstructionPhase	NumDays	230.00	178.00
tblConstructionPhase	NumDays	230.00	522.00
tblConstructionPhase	NumDays	230.00	433.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	154.00
tblConstructionPhase	NumDays	20.00	65.00
tblGrading	MaterialExported	0.00	380,000.00
tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblLandUse	LotAcreage	12.77	0.00
tblLandUse	LotAcreage	11.85	6.75
tblLandUse	LotAcreage	1.36	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblOnRoadDust	MeanVehicleSpeed	40.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	550.00
tblTripsAndVMT	HaulingTripLength	20.00	13,860.00
tblTripsAndVMT	HaulingTripNumber	1,400.00	1.00
tblTripsAndVMT	HaulingTripNumber	47,500.00	1.00
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripLength	6.90	0.25
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	187.00	700.00
tblTripsAndVMT	VendorTripNumber	187.00	400.00
tblTripsAndVMT	VendorTripNumber	187.00	110.00
tblTripsAndVMT	VendorTripNumber	187.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHD

tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripLength	14.70	0.25
tblTripsAndVMT	WorkerTripNumber	23.00	100.00
tblTripsAndVMT	WorkerTripNumber	28.00	64.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	1,000.00
tblTripsAndVMT	WorkerTripNumber	160.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.4309	32.7851	30.1538	0.0716	6.9184	1.4158	7.8827	3.3984	1.3321	4.7305						
2023	3.9806	77.1210	42.2017	0.1245	6.7953	1.2350	8.0005	3.4791	1.2340	4.6134						
2024	4.8803	37.7067	50.7272	0.0832	0.2584	1.3067	1.5650	0.0712	1.2779	1.3491						

2025	27.4444	36.0922	50.2423	0.0830	0.2584	1.1179	1.3762	0.0712	1.0930	1.1642						
2026	25.3631	17.9550	27.3179	0.0426	0.2161	0.6973	0.9134	0.0590	0.6635	0.7225						
Maximum	27.4444	77.1210	50.7272	0.1245	6.9184	1.4158	8.0005	3.4791	1.3321	4.7305						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3558	11.1526	38.2334	0.0716	2.7170	0.4958	3.2128	1.3534	0.4704	1.4492						
2023																
2024																
2025																
2026																
Maximum																

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	8.69	24.55	-5.27	0.00	55.69	32.37	51.22	57.78	32.82	54.46	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2022	6/30/2022	5	44	
2	Grading	Grading	7/1/2022	2/1/2023	5	154	

3	Mat Foundation	Building Construction	2/2/2023	2/28/2023	5	19
4	Concrete - Foundation to Grade	Building Construction	3/1/2023	11/3/2023	5	178
5	Building Construction - Structure, Shell, Exterior	Building Construction	11/4/2023	11/4/2025	5	522
6	Building Construction - Finishing	Building Construction	9/4/2024	5/1/2026	5	433
7	Architectural Coating	Architectural Coating	5/4/2025	5/4/2026	5	261
8	Paving	Paving	2/1/2026	5/1/2026	5	65

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,594,181; Residential Outdoor: 531,394; Non-Residential Indoor: 142,650; Non-Residential Outdoor: 47,550; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	2	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29
Grading	Excavators	3	8.00	158	0.38
Grading	Generator Sets	1	8.00	84	0.74
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Pumps	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	1	8.00	84	0.74
Mat Foundation	Plate Compactors	5	12.00	8	0.43
Mat Foundation	Pumps	5	12.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	0	8.00	46	0.45
Concrete - Foundation to Grade	Cranes	0	7.00	231	0.29
Concrete - Foundation to Grade	Forklifts	3	8.00	89	0.20
Concrete - Foundation to Grade	Generator Sets	1	8.00	84	0.74
Concrete - Foundation to Grade	Plate Compactors	2	8.00	8	0.43
Concrete - Foundation to Grade	Pumps	2	8.00	84	0.74
Concrete - Foundation to Grade	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete - Foundation to Grade	Welders	1	8.00	46	0.45
Building Construction - Structure, Shell, Exterior	Aerial Lifts	3	8.00	63	0.31
Building Construction - Structure, Shell, Exterior	Air Compressors	3	8.00	78	0.48
Building Construction - Structure, Shell, Exterior	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction - Structure, Shell, Exterior	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction - Structure, Shell, Exterior	Cranes	0	7.00	231	0.29
Building Construction - Structure, Shell, Exterior	Forklifts	3	8.00	89	0.20
Building Construction - Structure, Shell, Exterior	Generator Sets	1	8.00	84	0.74
Building Construction - Structure, Shell, Exterior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Structure, Shell, Exterior	Welders	3	8.00	46	0.45
Building Construction - Finishing	Aerial Lifts	4	8.00	63	0.31
Building Construction - Finishing	Air Compressors	4	8.00	78	0.48
Building Construction - Finishing	Cranes	0	7.00	231	0.29
Building Construction - Finishing	Forklifts	0	8.00	89	0.20
Building Construction - Finishing	Generator Sets	0	8.00	84	0.74

Building Construction - Finishing	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction - Finishing	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	0	6.00	78	0.48
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	9	100.00	0.00	1.00	0.25	6.90	550.00	LD_Mix	HDT_Mix	HHDT
Grading	11	64.00	10.00	1.00	0.25	6.90	13,860.00	LD_Mix	HDT_Mix	HHDT
Mat Foundation	11	100.00	700.00	0.00	0.25	0.25	20.00	LD_Mix	HHDT	HHDT
Concrete - Foundation to Grade	9	100.00	400.00	0.00	0.25	0.25	20.00	LD_Mix	HHDT	HHDT
Building Construction - Structure Shell	17	100.00	110.00	0.00	0.25	0.25	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Finishing	8	1,000.00	40.00	0.00	0.25	0.25	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	0.25	0.25	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	8.00	0.00	0.25	0.25	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment; Haul length accounts for total length onsite over the duration of demo and grading.

Water Exposed Area

Mitigation only applies to grading activities

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8876	0.0000	6.8876	1.0428	0.0000	1.0428						0.0000
Off-Road	1.8769	17.5420	22.2503	0.0393		0.8349	0.8349		0.7919	0.7919				0.8893		3,796.0782
Total	1.8769	17.5420	22.2503	0.0393	6.8876	0.8349	7.7225	1.0428	0.7919	1.8347				0.8893		3,796.0782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.6500e-003	0.0998	0.0291	4.1000e-004	0.0109	4.2000e-004	0.0113	2.9900e-003	4.0000e-004	3.3900e-003				2.6600e-003		44.8299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0921	0.0283	0.4240	3.8000e-004	0.0200	7.4000e-004	0.0207	5.4300e-003	6.8000e-004	6.1100e-003				2.2900e-003		37.8190
Total	0.0957	0.1281	0.4530	7.9000e-004	0.0309	1.1600e-003	0.0320	8.4200e-003	1.0800e-003	9.5000e-003				4.9500e-003		82.6490

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6862	0.0000	2.6862	0.4067	0.0000	0.4067						0.0000

Off-Road	1.2601	11.0245	24.1299	0.0393		0.4947	0.4947		0.4694	0.4694				0.8893		3,796.078 2
Total	1.2601	11.0245	24.1299	0.0393	2.6862	0.4947	3.1808	0.4067	0.4694	0.8761				0.8893		3,796.078 2

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.6500e-003	0.0998	0.0291	4.1000e-004	0.0109	4.2000e-004	0.0113	2.9900e-003	4.0000e-004	3.3900e-003				2.6600e-003		44.8299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0921	0.0283	0.4240	3.8000e-004	0.0200	7.4000e-004	0.0207	5.4300e-003	6.8000e-004	6.1100e-003				2.2900e-003		37.8190
Total	0.0957	0.1281	0.4530	7.9000e-004	0.0309	1.1600e-003	0.0320	8.4200e-003	1.0800e-003	9.5000e-003				4.9500e-003		82.6490

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3011	0.0000	6.3011	3.3525	0.0000	3.3525						0.0000
Off-Road	3.3182	31.1555	29.4307	0.0659		1.4106	1.4106		1.3271	1.3271				1.6589		6,357.635 1
Total	3.3182	31.1555	29.4307	0.0659	6.3011	1.4106	7.7117	3.3525	1.3271	4.6795				1.6589		6,357.635 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0260	0.7047	0.2069	2.9500e-003	0.0890	3.0200e-003	0.0920	0.0241	2.8900e-003	0.0270				0.0189		321.2540
Vendor	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201				0.0173		261.4537
Worker	0.0589	0.0181	0.2713	2.5000e-004	0.0128	4.8000e-004	0.0133	3.4700e-003	4.4000e-004	3.9100e-003				1.4600e-003		24.2042
Total	0.1127	1.6297	0.7231	5.6400e-003	0.1657	5.2600e-003	0.1710	0.0460	5.0100e-003	0.0510				0.0376		606.9119

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4574	0.0000	2.4574	1.3075	0.0000	1.3075						0.0000
Off-Road	0.7478	4.1647	37.5104	0.0659		0.0908	0.0908		0.0908	0.0908				1.6589		6,357.6351
Total	0.7478	4.1647	37.5104	0.0659	2.4574	0.0908	2.5482	1.3075	0.0908	1.3983				1.6589		6,357.6351

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	Calculated via spreadsheet methodology to account for use of MM (Onroad Haul Trucks meeting 2007 standards.														
Vendor	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201				0.0173	261.4537
Worker	0.0589	0.0181	0.2713	2.5000e-004	0.0128	4.8000e-004	0.0133	3.4700e-003	4.4000e-004	3.9100e-003				1.4600e-003	24.2042
Total	0.1127	1.6297	0.7231	5.6400e-003	0.1657	5.2600e-003	0.1710	0.0460	5.0100e-003	0.0510				0.0376	606.9119

3.4 Mat Foundation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0651	25.2467	33.1875	0.0596		1.2129	1.2129		1.2129	1.2129				0.2680		5,561.0902
Total	3.0651	25.2467	33.1875	0.0596		1.2129	1.2129		1.2129	1.2129				0.2680		5,561.0902

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.8305	51.8491	8.6293	0.0646	0.1674	0.0214	0.1888	0.0472	0.0204	0.0676				1.0333		7,048.9734
Worker	0.0850	0.0252	0.3850	3.7000e-004	0.0200	7.3000e-004	0.0207	5.4300e-003	6.7000e-004	6.1000e-003				2.0300e-003		36.4508

Total	0.9155	51.8743	9.0143	0.0649	0.1874	0.0221	0.2095	0.0526	0.0211	0.0737				1.0354		7,085.424 2
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3.5 Concrete - Foundation to Grade - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6038	13.0234	16.6532	0.0279		0.6505	0.6505		0.6363	0.6363				0.2578		2,596.078 7
Total	1.6038	13.0234	16.6532	0.0279		0.6505	0.6505		0.6363	0.6363				0.2578		2,596.078 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.4746	29.6281	4.9310	0.0369	0.0957	0.0122	0.1079	0.0270	0.0117	0.0386				0.5905		4,027.984 8
Worker	0.0850	0.0252	0.3850	3.7000e-004	0.0200	7.3000e-004	0.0207	5.4300e-003	6.7000e-004	6.1000e-003				2.0300e-003		36.4508
Total	0.5595	29.6533	5.3160	0.0373	0.1157	0.0129	0.1286	0.0324	0.0124	0.0447				0.5925		4,064.435 6

3.6 Building Construction - Structure, Shell, Exterior - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9426	22.6917	31.0864	0.0490		1.0767	1.0767		1.0481	1.0481				0.6936		4,566.8869
Total	2.9426	22.6917	31.0864	0.0490		1.0767	1.0767		1.0481	1.0481				0.6936		4,566.8869

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.1157	5.4345	1.3895	5.7600e-003	0.0283	1.9100e-003	0.0302	8.4400e-003	1.8200e-003	0.0103				0.0890		624.5188
Worker	0.0850	0.0252	0.3850	3.7000e-004	0.0200	7.3000e-004	0.0207	5.4300e-003	6.7000e-004	6.1000e-003				2.0300e-003		36.4508
Total	0.2006	5.4597	1.7744	6.1300e-003	0.0483	2.6400e-003	0.0509	0.0139	2.4900e-003	0.0164				0.0910		660.9696

3.6 Building Construction - Structure, Shell, Exterior - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	2.7615	21.4704	31.0214	0.0490		0.9350	0.9350		0.9099	0.9099				0.6821		4,566.9799
Total	2.7615	21.4704	31.0214	0.0490		0.9350	0.9350		0.9099	0.9099				0.6821		4,566.9799

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.1104	5.4139	1.3216	5.7000e-003	0.0283	1.7500e-003	0.0300	8.4400e-003	1.6700e-003	0.0101				0.0859		618.6835
Worker	0.0787	0.0226	0.3526	3.6000e-004	0.0200	7.2000e-004	0.0207	5.4300e-003	6.6000e-004	6.0900e-003				1.8200e-003		35.2088
Total	0.1891	5.4364	1.6742	6.0600e-003	0.0483	2.4700e-003	0.0507	0.0139	2.3300e-003	0.0162				0.0877		653.8922

3.6 Building Construction - Structure, Shell, Exterior - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5901	20.3281	30.9378	0.0490		0.7976	0.7976		0.7763	0.7763				0.6717		4,567.2979
Total	2.5901	20.3281	30.9378	0.0490		0.7976	0.7976		0.7763	0.7763				0.6717		4,567.2979

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.1059	5.3898	1.2690	5.6400e-003	0.0283	1.6100e-003	0.0299	8.4400e-003	1.5400e-003	9.9700e-003				0.0830		612.5427
Worker	0.0733	0.0203	0.3237	3.4000e-004	0.0200	7.1000e-004	0.0207	5.4300e-003	6.5000e-004	6.0800e-003				1.6300e-003		33.8548
Total	0.1792	5.4101	1.5928	5.9800e-003	0.0483	2.3200e-003	0.0506	0.0139	2.1900e-003	0.0161				0.0846		646.3975

3.7 Building Construction - Finishing - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1025	8.6054	14.0252	0.0226		0.3614	0.3614		0.3585	0.3585				0.2949		2,158.9082
Total	1.1025	8.6054	14.0252	0.0226		0.3614	0.3614		0.3585	0.3585				0.2949		2,158.9082

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0401	1.9687	0.4806	2.0700e-003	0.0103	6.4000e-004	0.0109	3.0700e-003	6.1000e-004	3.6700e-003				0.0312		224.9758
Worker	0.7871	0.2258	3.5260	3.5700e-003	0.1998	7.1800e-003	0.2070	0.0543	6.6100e-003	0.0609				0.0182		352.0875
Total	0.8272	2.1945	4.0065	5.6400e-003	0.2101	7.8200e-003	0.2179	0.0573	7.2200e-003	0.0645				0.0494		577.0633

3.7 Building Construction - Finishing - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421
Total	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0385	1.9599	0.4615	2.0500e-003	0.0103	5.9000e-004	0.0109	3.0700e-003	5.6000e-004	3.6300e-003				0.0302		222.7428
Worker	0.7331	0.2032	3.2374	3.4300e-003	0.1998	7.1000e-003	0.2069	0.0543	6.5300e-003	0.0608				0.0163		338.5480
Total	0.7716	2.1631	3.6989	5.4800e-003	0.2101	7.6900e-003	0.2178	0.0573	7.0900e-003	0.0644				0.0465		561.2908

3.7 Building Construction - Finishing - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421
Total	1.0474	8.1909	14.0128	0.0226		0.3103	0.3103		0.3075	0.3075				0.2923		2,158.8421

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0372	1.9512	0.4469	2.0300e-003	0.0103	5.4000e-004	0.0108	3.0700e-003	5.1000e-004	3.5800e-003				0.0292		220.5697

Worker	0.6849	0.1839	2.9887	3.3100e-003	0.1998	6.9500e-003	0.2067	0.0543	6.3900e-003	0.0607				0.0147		326.5975
Total	0.7221	2.1350	3.4356	5.3400e-003	0.2101	7.4900e-003	0.2176	0.0573	6.9000e-003	0.0642				0.0439		547.1673

3.8 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8561					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000
Total	22.8561	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000

3.8 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.8561					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000
Total	22.8561	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000				0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000

3.9 Paving - 2026**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	0.7164	7.2352	9.7203	0.0142		0.3792	0.3792		0.3489	0.3489			0.4452		1,387.805	5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000					0.0000	
Total	0.7164	7.2352	9.7203	0.0142		0.3792	0.3792		0.3489	0.3489			0.4452		1,387.805	5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000		0.0000
Vendor	7.4300e-003	0.3902	0.0894	4.1000e-004	2.0600e-003	1.1000e-004	2.1600e-003	6.1000e-004	1.0000e-004	7.2000e-004				5.8400e-003		44.1139
Worker	0.0137	3.6800e-003	0.0598	7.0000e-005	4.0000e-003	1.4000e-004	4.1300e-003	1.0900e-003	1.3000e-004	1.2100e-003				2.9000e-004		6.5320
Total	0.0211	0.3939	0.1492	4.8000e-004	6.0600e-003	2.5000e-004	6.2900e-003	1.7000e-003	2.3000e-004	1.9300e-003				6.1300e-003		50.6459

Sunset and Western

Draft EIR

Appendix B-2

Air Quality Worksheets and Modeling Output Files

- Appendix B-2.2: Operational Emissions Inventory
 - CalEEMod Output Summary
 - CalEEMod Outputs – Operations (Baseline and Project)
 - Baseline (Existing)
 - Baseline (Buildout Year)
 - Buildout

Sunset and Western - Existing Operations (2017) - South Coast Air Basin, Winter

Sunset and Western - Existing Operations (2017)
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0
Fast Food Restaurant with Drive Thru	3.94	1000sqft	0.09	3,943.00	0
Supermarket	78.33	1000sqft	1.80	78,328.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2017
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	862	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2017

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - LADOT VMT Calculator Assumptions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Energy Use - Existing Uses

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,940.00	3,943.00
tblLandUse	LandUseSquareFeet	78,330.00	78,328.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	862

tblVehicleTrips	CC_TL	8.40	6.32
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	8,592.94
tblVehicleTrips	ST_TR	0.00	5,660.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	8,592.94
tblVehicleTrips	SU_TR	0.00	5,660.00
tblVehicleTrips	WD_TR	496.12	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	5,966.00
tblVehicleTrips	WD_TR	0.00	3,930.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
Mobile	27.3006	104.9080	257.5253	0.5856	42.4624	0.8377	43.3001	11.3640	0.7902	12.1542						
Total	29.2206	105.6467	258.1545	0.5900	42.4624	0.8939	43.3563	11.3640	0.8463	12.2103						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

Energy	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
Mobile	27.3006	104.9080	257.5253	0.5856	42.4624	0.8377	43.3001	11.3640	0.7902	12.1542						
Total	29.2206	105.6467	258.1545	0.5900	42.4624	0.8939	43.3563	11.3640	0.8463	12.2103						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	27.3006	104.9080	257.5253	0.5856	42.4624	0.8377	43.3001	11.3640	0.7902	12.1542						
Unmitigated	27.3006	104.9080	257.5253	0.5856	42.4624	0.8377	43.3001	11.3640	0.7902	12.1542						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00				
Supermarket	0.00	0.00	0.00				
User Defined Commercial	5,966.00	8,592.94	8592.94	15,451,299		15,451,299	
User Defined Industrial	3,930.00	5,660.00	5660.00	161,044		161,044	
Total	9,896.00	14,252.94	14,252.94	15,612,343		15,612,343	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.32	0.00	0.00	100.00	0.00	100	0	0
User Defined Industrial	0.00	0.00	0.00	0.00	100.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069
Supermarket	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069
User Defined Commercial	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069
User Defined Industrial	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
NaturalGas Unmitigated	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2531.62	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189						
Supermarket	5002.26	0.0540	0.4904	0.4120	2.9400e-003		0.0373	0.0373		0.0373	0.0373						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2531.62	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189						
Supermarket	5002.26	0.0540	0.4904	0.4120	2.9400e-003		0.0373	0.0373		0.0373	0.0373						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Unmitigated	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6290					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.5000e-004	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Total	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6290					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.5000e-004	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Total	1.8388	8.0000e-005	8.7700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Sunset and Western - Existing Operations (2026) - South Coast Air Basin, Winter

Sunset and Western - Existing Operations (2026)
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0
Fast Food Restaurant with Drive Thru	3.94	1000sqft	0.09	3,943.00	0
Supermarket	78.33	1000sqft	1.80	78,328.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	585	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2026

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - LADOT VMT Calculator Assumptions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Energy Use - Existing Uses

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,940.00	3,943.00
tblLandUse	LandUseSquareFeet	78,330.00	78,328.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	585

tblVehicleTrips	CC_TL	8.40	6.32
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	8,592.94
tblVehicleTrips	ST_TR	0.00	5,660.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	8,592.94
tblVehicleTrips	SU_TR	0.00	5,660.00
tblVehicleTrips	WD_TR	496.12	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	5,966.00
tblVehicleTrips	WD_TR	0.00	3,930.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
Mobile	13.6279	62.9111	123.3745	0.4638	42.4741	0.3605	42.8346	11.3603	0.3345	11.6948						
Total	15.5479	63.6498	124.0035	0.4682	42.4741	0.4166	42.8908	11.3603	0.3907	11.7509						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

Energy	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
Mobile	13.6279	62.9111	123.3745	0.4638	42.4741	0.3605	42.8346	11.3603	0.3345	11.6948						
Total	15.5479	63.6498	124.0035	0.4682	42.4741	0.4166	42.8908	11.3603	0.3907	11.7509						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.6279	62.9111	123.3745	0.4638	42.4741	0.3605	42.8346	11.3603	0.3345	11.6948						
Unmitigated	13.6279	62.9111	123.3745	0.4638	42.4741	0.3605	42.8346	11.3603	0.3345	11.6948						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00				
Supermarket	0.00	0.00	0.00				
User Defined Commercial	5,966.00	8,592.94	8592.94	15,463,135		15,463,135	
User Defined Industrial	3,930.00	5,660.00	5660.00	161,044		161,044	
Total	9,896.00	14,252.94	14,252.94	15,624,179		15,624,179	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.32	0.00	0.00	100.00	0.00	100	0	0
User Defined Industrial	0.00	0.00	0.00	0.00	100.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Supermarket	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Commercial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Industrial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						
NaturalGas Unmitigated	0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2531.62	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189						
Supermarket	5002.26	0.0540	0.4904	0.4120	2.9400e-003		0.0373	0.0373		0.0373	0.0373						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2531.62	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189						
Supermarket	5002.26	0.0540	0.4904	0.4120	2.9400e-003		0.0373	0.0373		0.0373	0.0373						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0813	0.7386	0.6204	4.4300e-003		0.0561	0.0561		0.0561	0.0561						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Unmitigated	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6290					0.0000	0.0000		0.0000	0.0000						
Landscaping	7.9000e-004	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Total	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2090					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6290					0.0000	0.0000		0.0000	0.0000						
Landscaping	7.9000e-004	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Total	1.8387	8.0000e-005	8.5800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Sunset and Western - Project Operations (2026) - South Coast Air Basin, Winter

Sunset and Western - Project Operations (2026)
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	1,419.00	Space	12.77	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	11.85	787,250.00	2102
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3
Regional Shopping Center	26.00	1000sqft	0.60	26,000.00	0
Supermarket	69.00	1000sqft	1.58	69,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11	Operational Year	2026		
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	585	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2026

2015 4422 lb/MW hr
Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - see assumptions

Woodstoves - No wood burning hearths

Energy Use - see assumptions (Parking Structure Energy Usage)

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - see assumptions

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Emergency Generators and Fire Pumps EF - SCAQMD BACT Requirements

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	3.92	0.46

tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	585
tblStationaryGeneratorsPumpsEF	NOX_EF	2.85	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblVehicleTrips	CC_TL	8.40	6.28
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	4.98	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	12,465.96
tblVehicleTrips	ST_TR	0.00	4,125.00
tblVehicleTrips	SU_TR	3.65	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	12,465.96
tblVehicleTrips	SU_TR	0.00	4,125.00
tblVehicleTrips	WD_TR	4.20	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	8,655.00
tblVehicleTrips	WD_TR	0.00	2,864.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	213.9978	15.9709	435.1118	0.9581		56.5590	56.5590		56.5590	56.5590						
Energy	0.2464	2.1309	1.0811	0.0134		0.1703	0.1703		0.1703	0.1703						
Mobile	16.7561	78.0793	165.5739	0.6494	60.8626	0.4959	61.3585	16.2785	0.4602	16.7387						

Stationary	0.5744	0.2816	1.4645	2.7600e-003		0.0113	0.0113		0.0113	0.0113						
Total	231.5747	96.4628	603.2313	1.6236	60.8626	57.2364	118.0990	16.2785	57.2007	73.4792						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	22.4251	11.6882	65.4935	0.0734		1.2256	1.2256		1.2256	1.2256						
Energy	0.2348	2.0305	1.0304	0.0128		0.1622	0.1622		0.1622	0.1622						
Mobile	16.7561	78.0793	165.5739	0.6494	60.8626	0.4959	61.3585	16.2785	0.4602	16.7387						
Stationary	0.5744	0.2816	1.4645	2.7600e-003		0.0113	0.0113		0.0113	0.0113						
Total	39.9904	92.0797	233.5623	0.7383	60.8626	1.8949	62.7575	16.2785	1.8593	18.1378						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	82.73	4.54	61.28	54.53	0.00	96.69	46.86	0.00	96.75	75.32	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.7561	78.0793	165.5739	0.6494	60.8626	0.4959	61.3585	16.2785	0.4602	16.7387						
Unmitigated	16.7561	78.0793	165.5739	0.6494	60.8626	0.4959	61.3585	16.2785	0.4602	16.7387						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
User Defined Commercial	8,655.00	12,465.96	12,465.96	22,271,028	22,271,028
User Defined Residential	2,864.00	4,125.00	4,125.00	117,364	117,364
Total	11,519.00	16,590.96	16,590.96	22,388,392	22,388,392

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.28	0.00	0.00	100.00	0.00	100	0	0
User Defined Residential	0.00	0.00	0.00	100.00	0.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Enclosed Parking with Elevator	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Regional Shopping Center	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Supermarket	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Commercial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Residential	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2348	2.0305	1.0304	0.0128		0.1622	0.1622		0.1622	0.1622						
NaturalGas Unmitigated	0.2464	2.1309	1.0811	0.0134		0.1703	0.1703		0.1703	0.1703						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	18560.1	0.2002	1.7104	0.7279	0.0109		0.1383	0.1383		0.1383	0.1383						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	116.822	1.2600e-003	0.0115	9.6200e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004						
Supermarket	4172.14	0.0450	0.4090	0.3436	2.4500e-003		0.0311	0.0311		0.0311	0.0311						

User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000					
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000					
Total		0.2464	2.1309	1.0811	0.0134		0.1703	0.1703		0.1703	0.1703					

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	17.6769	0.1906	1.6291	0.6932	0.0104		0.1317	0.1317		0.1317	0.1317						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Regional Shopping Center	0.10863	1.1700e-003	0.0107	8.9500e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004						
Supermarket	3.98631	0.0430	0.3908	0.3283	2.3400e-003		0.0297	0.0297		0.0297	0.0297						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.2348	2.0305	1.0304	0.0128		0.1622	0.1622		0.1622	0.1622						

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	22.4251	11.6882	65.4935	0.0734		1.2256	1.2256		1.2256	1.2256						
Unmitigated	213.9978	15.9709	435.1118	0.9581		56.5590	56.5590		56.5590	56.5590						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.6341					0.0000	0.0000		0.0000	0.0000						
Consumer Products	17.6696					0.0000	0.0000		0.0000	0.0000						

Hearth	192.8585	15.2708	374.2942	0.9549		56.2218	56.2218		56.2218	56.2218						
Landscaping	1.8356	0.7002	60.8177	3.2200e-003		0.3372	0.3372		0.3372	0.3372						
Total	213.9978	15.9709	435.1118	0.9581		56.5590	56.5590		56.5590	56.5590						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.6341					0.0000	0.0000		0.0000	0.0000						
Consumer Products	17.6696					0.0000	0.0000		0.0000	0.0000						
Hearth	1.2858	10.9881	4.6758	0.0701		0.8884	0.8884		0.8884	0.8884						
Landscaping	1.8356	0.7002	60.8177	3.2200e-003		0.3372	0.3372		0.3372	0.3372						
Total	22.4251	11.6882	65.4934	0.0734		1.2256	1.2256		1.2256	1.2256						

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	350	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (200 - 250 HP)	0.5744	0.2816	1.4645	2.7600e-003		0.0113	0.0113		0.0113	0.0113						
Total	0.5744	0.2816	1.4645	2.7600e-003		0.0113	0.0113		0.0113	0.0113						

11.0 Vegetation

Sunset Western

CO Hotspots

CO Hotspots Analysis - Maximum Impacted Intersection

Peak Hour Volumes

Intersection Direction	Western Avenue and Santa Monica Boulevard	
	AM	PM
NBL	124	149
NBT	1122	1152
NBR	117	132
SBL	58	110
SBT	1341	1457
SBR	150	160
EBL	214	245
EBT	1030	1140
EBR	119	96
WBL	102	107
WBT	1125	1359
WBR	104	145
Peak Hour Totals	5606	6252
Daily Maximum	56,060	62,520

Sunset and Western

Draft EIR

Appendix B-3

Greenhouse Gas Emissions Worksheets and Modeling Output Files

- Appendix B-3.1: GHG Modeling Parameters and Summary of Emissions
 - GHG Parameters and Summary
 - Land Use and Site Enhancement
 - Trip Generation
 - Parking Structure Energy Usage
- Appendix B-3.2: CalEEMod Outputs
 - GHG Emissions Summary
 - Construction Annual
 - Baseline (Existing); Baseline (Buildout Year); Buildout

Sunset and Western

Draft EIR

Appendix B-3

Greenhouse Gas Emissions Worksheets and Modeling Output Files

- Appendix B-3.1: GHG Modeling Parameters and Summary of Emissions
 - GHG Parameters and Summary
 - Land Use and Site Enhancement
 - Trip Generation
 - Parking Structure Energy Usage

Sunset Western

VMT Calculations for CalEEMod Inputs

June 8, 2020

VMT Summary

	Existing	Proposed Project	With Mitigation	Project Weekday Trips	Weekend Trips	Weekend Vs. Weekday Ratio
Daily Trips	5,966	8,655	8,655	1	1	1.44
Daily VMT	37,734	54,347	54,347			
Pass-by trips	3930	2864	2864			

Generation Rates for Weekend Scalar

	DU/TSF	Rate (Daily)		Passby %	Daily Trips	
		Weekday	Weekend		Weekday	Weekend
Multifamily Low Rise (ITE 220)	735	6.65	8.14	0	4888	5983
Shopping Center (ITE 820)	26	42.7	46.12	50%	555	600
Supermarket (ITE 850)	69	102.24	177.62	40%	4233	7353
					9676	13936

Project without TDM (MXD Data)

	Unadjusted Trips Pre MXD	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted Pre MXD VMT	MXD VMT	Percent Reduction for MXD
Home Based Work Production	659	-34.9%	429	8.1	5,338	3475	
Home Based Other Production	1825	-47.4%	960	4.5	8,213	4,320	
Non-Home Based Other Production	2642	-5.9%	2485	7.8	20608	19383	
Home-Based Work Attraction	476	-40.1%	285	8.0	3808	2280	
Home-Based Other Attraction	4978	-41.9%	2894	5.5	27,379	15917	
Non-Home Based Other Attraction	1996	-6.3%	1871	5.7	11377	10665	
Total	12,576		8,924		76,723	56,040	27%
Residential VMT			1,389			7,795	

Project with TDM (MXD Data)

	Proposed Project			Project with Mitigation Measures			
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT	
Home Based Work Production	-3.0%	416	3370	-3.0%	416	3370	
Home Based Other Production	-3.0%	931	4,190	-3.0%	931	4,190	
Non-Home Based Other Production	-3.0%	2410	18797	-3.0%	2410	18797	
Home-Based Work Attraction	-3.0%	276	2211	-3.0%	276	2211	
Home-Based Other Attraction	-3.0%	2807	15436	-3.0%	2807	15436	
Non-Home Based Other Attraction	-3.0%	1815	10343	-3.0%	1815	10343	29%
Total		8,655	54,347		8,655	54,347	
Residential VMT			7,560			7,560	

Source: Gibson Transportation Consulting, Inc.

Calculation of Parking Garage Ventilation Energy Factor

Full Power Ventilation Flowrate:	0.5 cfm/sf	Section 120.6(c) of California Building Code, Mandatory Requirements for Enclosed Parking Garages, provides a minimum 0.15 cfm/sf flowrate. Conservatively assumed 0.5 cfm/sf.
Fan Horsepower/1,000 sf:	0.19 hp/1,000 sf	Fan Horsepower = (CFM x Static Pressure of 1.6 in WC)/(6356 x Motor Fan Efficiency of 65%)
Setback Mode Power Ventilation Flowrate:	0.05 cfm/sf	Energy Star technical reference recommends a minimum flow rate of 0.05 cfm/sf when fan is in setback mode.
Fan Horsepower/1,000 sf:	0.02 hp/1,000 sf	Fan Horsepower = (CFM x Static Pressure of 1.6 in WC)/(6356 x Motor Fan Efficiency of 65%)
Fan Horsepower/1,000 sf per Day:	1.51 hp/1,000 sf/Day	Energy Star technical reference recommends 6 hours per day at full power and 18 hours per day at 0.05 cfm/sf in setback mode
Horsepower to kW Conv.	0.746 kW per hp	
Fan kW/1,000 sf per Day:	1.13 kW/1,000 sf/Day	
Annual kW/sf	0.41 kWh/sf Annual	
Adjustment:	0.46 kWh/sf Annual	(CalEEMod applies mitigation to all land uses. So, this adjustment accounts for the 10% reduction in lighting associated with Title 24)

GHG Emissions Reductions for Residential Uses Associated with PDF XX-XX (Electric Vehicle Charging Stations/Plugins)

Step 1: Estimating GHG Emissions Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle

LADWP Electricity Emission Factor ¹	0.27 MTCO ₂ E/MWh
Fuel Economy of Electric Vehicle ²	0.33 kWh/mile
Electric Vehicle GHG Emissions	87.6 grams/mile
GHG Emissions from Residential Miles Traveled (CalEEMod) ³	427.0 grams/mile
GHG Emissions Reduction from Additional Electric Vehicles, per mile	339.4 grams/mile

Step 2: Estimating Project Residential-Related VMT GHG Emissions

Residential Average Yearly VMT ⁴	2,845,175 miles/year
Percent of Residential Miles Driven in Electric Vehicles due to this Measure	10.0%
Residential VMT that is Displaced by EVs due to this Measure	284,518 miles/year
GHG Emissions Reduction from Residential Electric Vehicles	97 MTCO ₂ E/MWh

Energy Usage for Charging Vehicles	93,891 kWh/year
------------------------------------	-----------------

Notes:

- 1) CO₂ intensity factor reflects a 2026 RPS for LADWP (585 lbs of CO₂E/MWh).
- 2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: http://afdc.energy.gov/fuels/electricity_benefits.html.
- 3) CalEEMod Output file provided in Appendix XX.X of this Draft EIR.
- 4) Residential charging of vehicles would primarily occur over night, while commercial use charging of vehicles would primarily occur during the day. In addition, it is assumed that the charging stations/plugins for residential uses would be fully utilized which is supported by the projected number of electric vehicles in the future. Bloomberg New Energy Finance projects that electric vehicles will represent 35 percent of global new car sales by 2040 (<https://about.bnef.com/blog/electric-vehicles-to-be-35-of-global-new-car-sales-by-2040/>).

GHG Emissions Reductions for Commercial Uses Associated with PDF XX-X (Electric Vehicle Charging Stations/Plugins)

Step 1: Estimating GHG Emissions Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle

LADWP Electricity Emission Factor ^{1+A32}	0.27 MTCO ₂ E/MWh
Fuel Economy of Electric Vehicle ²	0.33 kWh/mile
Gasoline/Diesel CO ₂ Emissions While Running ³	204.6 grams/mile
Annual VMT Reduction per Parking Spot ⁴	9,125 miles/charging station/year
Number of On-Site Chargers ⁵	142
Annual VMT Reduction All Stations/Plugins (Based on Charge)	1,295,750

Step 2: Estimating GHG Emissions Reduction from Installing Electric Vehicle Charging Stations/Plugins

GHG Emissions of Gasoline/Diesel Vehicle	265 MTCO ₂ E/MWh
GHG Emissions of Electric Vehicle	113 MTCO ₂ E/MWh
GHG Emissions Reduction	152 MTCO ₂ E/MWh

Notes:

- 1) CO₂ intensity factor reflects a 2026 RPS for LADWP (585 lbs of CO₂E/MWh).
- 2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: http://afdc.energy.gov/fuels/electricity_benefits.html.
- 3) CARB, 2017. EMFAC2014, running exhaust emission rate for CO₂ and CH₄ for light duty gasoline- and diesel-powered vehicles in Los Angeles, aggregated for all models and speeds, averaged over all seasons for 2026.
- 4) Annual VMT reduction estimated based on an estimate of 10 hours of charge time for a Level 2 charging station that charges at a rate of 25 driving range per hour. It is conservatively assumed that 10% of the miles charged would be driven by the charged vehicles.
- 5) City Code requires 10% of parking spaces to be equipped with EV chargers.

Sunset and Western

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Appendix B-3

Greenhouse Gas Emissions Worksheets and Modeling Output Files

- Appendix B-3.2: CalEEMod Outputs
 - GHG Emissions Summary
 - Construction Annual
 - Baseline (Existing); Baseline (Buildout Year); Buildout

CalEEMod Outputs

Existing Uses

Construction Emissions - Annual

CalEEMod Output - Annual Construction

Year	CO2e
2022	2,761
2023	2,221
2024	1,479
2025	2,280
2026	524
30-year Amortized	309

Operational Emissions - Annual

Category	Baseline (Existing Year) CO2e	Baseline (Buildout Year) CO2e	Project (Buildout Year) No MXD/PDFs CO2e	Project(Buildout Year) - With MXD CO2e	Project(Buildout Year) - No MXD less Baseline Increment	Project(Buildout Year) - With MXD less Baseline Increment	MXD Reduction (tons)	MXD Reduction (%)
Area	0	0	173	173	173	173	0	0%
Energy	1454	1035	2324	2179	1289	1143	(146)	-11%
Mobile	7791	6237	12224	8719	3479	2481	(998)	-29%
EV			0	(248)	0	(248)	(248)	0%
Stationary			2	2	2	2	0	0%
Waste	58	58	90	90	32	32	0	0%
Water	72	54	375	300	322	247	(75)	-23%
Operations Total	9374	7384	15187	11213	5296	3829	(1466)	-28%
Construction Amortized			309	309	309	309	0	0%
			15496	11522	5604	4138	(1466)	-26%

Sunset and Western Construction (Regional) - South Coast Air Basin, Annual

Sunset and Western Construction (Regional)
South Coast Air Basin, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,419.00	Space	0.00	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	6.75	787,250.00	2102
Strip Mall	36.00	1000sqft	0.83	36,000.00	0
Supermarket	59.10	1000sqft	0.00	59,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - see assumptions

Construction Phase - Project Specific Construction Schedule (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment -

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Off-road Equipment - Project Specific Construction Equipment Mix (See AQ Appendix)

Trips and VMT - Project Specific Construction Trips (See AQ Appendix)

Demolition -

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier IV Offroad Equipment for Grading/Excavation Phase.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	230.00	19.00

tblConstructionPhase	NumDays	230.00	178.00
tblConstructionPhase	NumDays	230.00	522.00
tblConstructionPhase	NumDays	230.00	433.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	154.00
tblConstructionPhase	NumDays	20.00	65.00
tblGrading	MaterialExported	0.00	380,000.00
tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblLandUse	LotAcreage	12.77	0.00
tblLandUse	LotAcreage	11.85	6.75
tblLandUse	LotAcreage	1.36	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	1,400.00	2,200.00
tblTripsAndVMT	HaulingTripNumber	47,500.00	55,440.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	187.00	700.00
tblTripsAndVMT	VendorTripNumber	187.00	400.00
tblTripsAndVMT	VendorTripNumber	187.00	110.00
tblTripsAndVMT	VendorTripNumber	187.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	23.00	100.00
tblTripsAndVMT	WorkerTripNumber	28.00	64.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	100.00
tblTripsAndVMT	WorkerTripNumber	798.00	1,000.00
tblTripsAndVMT	WorkerTripNumber	160.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022														0.2737		2,761.1058
2023														0.1884		2,221.2671
2024														0.1242		1,478.5954
2025														0.1487		2,280.0426
2026														0.0343		523.6167
Maximum														0.2737		2,761.1058

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022														0.2737		2,761.1053
2023														0.1884		2,221.2666
2024														0.1242		1,478.5947
2025														0.1487		2,280.0417
2026														0.0343		523.6166
Maximum														0.2737		2,761.1053

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction											0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2022	7-31-2022	2.2864	1.8037
2	8-1-2022	10-31-2022	4.5812	3.6099
3	11-1-2022	1-31-2023	4.1362	3.2099
4	2-1-2023	4-30-2023	2.2586	1.8328
5	5-1-2023	7-31-2023	1.8805	1.5887
6	8-1-2023	10-31-2023	1.8765	1.5846
7	11-1-2023	1-31-2024	1.1260	0.9642
8	2-1-2024	4-30-2024	1.0459	0.9004
9	5-1-2024	7-31-2024	1.0685	0.9197
10	8-1-2024	10-31-2024	1.4491	1.3003
11	11-1-2024	1-31-2025	1.6561	1.5114
12	2-1-2025	4-30-2025	1.5476	1.4153
13	5-1-2025	7-31-2025	2.3136	2.1769
14	8-1-2025	10-31-2025	2.3445	2.2078
15	11-1-2025	1-31-2026	1.3750	1.3690
16	2-1-2026	4-30-2026	1.5477	1.5477
17	5-1-2026	7-31-2026	0.0418	0.0418
		Highest	4.5812	3.6099

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2022	6/30/2022	5	44	
2	Grading	Grading	7/1/2022	2/1/2023	5	154	

3	Mat Foundation	Building Construction	2/2/2023	2/28/2023	5	19
4	Concrete - Foundation to Grade	Building Construction	3/1/2023	11/3/2023	5	178
5	Building Construction - Structure, Shell, Exterior	Building Construction	11/4/2023	11/4/2025	5	522
6	Building Construction - Finishing	Building Construction	9/4/2024	5/1/2026	5	433
7	Architectural Coating	Architectural Coating	5/4/2025	5/4/2026	5	261
8	Paving	Paving	2/1/2026	5/1/2026	5	65

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,594,181; Residential Outdoor: 531,394; Non-Residential Indoor: 142,650; Non-Residential Outdoor: 47,550; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Generator Sets	1	8.00	84	0.74
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	2	8.00	221	0.50
Grading	Cranes	1	8.00	231	0.29
Grading	Excavators	3	8.00	158	0.38
Grading	Generator Sets	1	8.00	84	0.74
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Pumps	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	1	8.00	84	0.74
Mat Foundation	Plate Compactors	5	12.00	8	0.43
Mat Foundation	Pumps	5	12.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	0	8.00	46	0.45
Concrete - Foundation to Grade	Cranes	0	7.00	231	0.29
Concrete - Foundation to Grade	Forklifts	3	8.00	89	0.20
Concrete - Foundation to Grade	Generator Sets	1	8.00	84	0.74
Concrete - Foundation to Grade	Plate Compactors	2	8.00	8	0.43
Concrete - Foundation to Grade	Pumps	2	8.00	84	0.74
Concrete - Foundation to Grade	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete - Foundation to Grade	Welders	1	8.00	46	0.45
Building Construction - Structure, Shell, Exterior	Aerial Lifts	3	8.00	63	0.31
Building Construction - Structure, Shell, Exterior	Air Compressors	3	8.00	78	0.48
Building Construction - Structure, Shell, Exterior	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction - Structure, Shell, Exterior	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction - Structure, Shell, Exterior	Cranes	0	7.00	231	0.29
Building Construction - Structure, Shell, Exterior	Forklifts	3	8.00	89	0.20
Building Construction - Structure, Shell, Exterior	Generator Sets	1	8.00	84	0.74
Building Construction - Structure, Shell, Exterior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Structure, Shell, Exterior	Welders	3	8.00	46	0.45
Building Construction - Finishing	Aerial Lifts	4	8.00	63	0.31
Building Construction - Finishing	Air Compressors	4	8.00	78	0.48
Building Construction - Finishing	Cranes	0	7.00	231	0.29
Building Construction - Finishing	Forklifts	0	8.00	89	0.20
Building Construction - Finishing	Generator Sets	0	8.00	84	0.74

Building Construction - Finishing	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction - Finishing	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	0	6.00	78	0.48
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	9	100.00	0.00	2,200.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Grading	11	64.00	10.00	55,440.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Mat Foundation	11	100.00	700.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Concrete - Foundation to Grade	9	100.00	400.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Building Construction - Structure Shell	17	100.00	110.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Finishing	8	1,000.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Sunset and Western - Existing Operations (2017) - South Coast Air Basin, Annual

Sunset and Western - Existing Operations (2017)
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0
Fast Food Restaurant with Drive Thru	3.94	1000sqft	0.09	3,943.00	0
Supermarket	78.33	1000sqft	1.80	78,328.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2017
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	862	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2017

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - LADOT VMT Calculator Assumptions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Energy Use - Existing Uses

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,940.00	3,943.00
tblLandUse	LandUseSquareFeet	78,330.00	78,328.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	862

tblVehicleTrips	CC_TL	8.40	6.32
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	8,592.94
tblVehicleTrips	ST_TR	0.00	5,660.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	8,592.94
tblVehicleTrips	SU_TR	0.00	5,660.00
tblVehicleTrips	WD_TR	496.12	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	5,966.00
tblVehicleTrips	WD_TR	0.00	3,930.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.2400e-003
Energy																1,454.0098
Mobile																7,790.6802
Waste																244.9935
Water																71.8122
Total																9,561.4980

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Area																2.2400e-003
Energy																1,454.0098
Mobile																7,790.6802
Waste																57.8185
Water																71.8122
Total																9,374.3229

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																7,790.6802
Unmitigated																7,790.6802

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
User Defined Commercial	5,966.00	8,592.94	8592.94	15,451,299	15,451,299
User Defined Industrial	3,930.00	5,660.00	5660.00	161,044	161,044
Total	9,896.00	14,252.94	14,252.94	15,612,343	15,612,343

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.32	0.00	0.00	100.00	0.00	100	0	0
User Defined Industrial	0.00	0.00	0.00	0.00	100.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LD11	LD12	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069

Supermarket	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069
User Defined Commercial	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069
User Defined Industrial	0.544524	0.045551	0.198447	0.129336	0.019135	0.005878	0.019261	0.027434	0.001914	0.002222	0.004531	0.000699	0.001069

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																1,306.3943
Electricity Unmitigated																1,306.3943
NaturalGas Mitigated																147.6154
NaturalGas Unmitigated																147.6154

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru Supermarket	924042																49.6034
	1.82583e+006																98.0120
User Defined Commercial	0																0.0000
User Defined Industrial	0																0.0000
Total																	147.6154

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru Supermarket	924042																49.6034
	1.82583e+006																98.0120
User Defined Commercial	0																0.0000

User Defined Industrial	0																0.0000
Total																	147.6154

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	190526				74.7121
Supermarket	3.14095e+006				1,231.6822
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					1,306.3943

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	190526				74.7121
Supermarket	3.14095e+006				1,231.6822
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					1,306.3943

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2.2400e-003
Unmitigated																2.2400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.2400e-003
Total																2.2400e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.2400e-003
Total																2.2400e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				71.8122
Unmitigated				71.8122

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Fast Food Restaurant with Drive-Thru	1.19592 / 0.0763355			8.0668
Supermarket	9.6556 / 0.298627			63.7454
User Defined Commercial	0 / 0			0.0000
User Defined Industrial	0 / 0			0.0000
Total				71.8122

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive-Thru	1.19592 / 0.0763355				8.0668
Supermarket	9.6556 / 0.298627				63.7454
User Defined Commercial	0 / 0				0.0000
User Defined Industrial	0 / 0				0.0000
Total					71.8122

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				57.8185
Unmitigated				244.9935

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive-Thru	45.38				22.8217
Supermarket	441.78				222.1718

User Defined Commercial	0			0.0000
User Defined Industrial	0			0.0000
Total				244.9935

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	10.7097				5.3859
Supermarket	104.26				52.4326
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					57.8185

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Sunset and Western - Existing Operations (2026) - South Coast Air Basin, Annual

Sunset and Western - Existing Operations (2026)
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0
Fast Food Restaurant with Drive Thru	3.94	1000sqft	0.09	3,943.00	0
Supermarket	78.33	1000sqft	1.80	78,328.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	585	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2026

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - LADOT VMT Calculator Assumptions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Energy Use - Existing Uses

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,940.00	3,943.00
tblLandUse	LandUseSquareFeet	78,330.00	78,328.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	585

tblVehicleTrips	CC_TL	8.40	6.32
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	8,592.94
tblVehicleTrips	ST_TR	0.00	5,660.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	8,592.94
tblVehicleTrips	SU_TR	0.00	5,660.00
tblVehicleTrips	WD_TR	496.12	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	5,966.00
tblVehicleTrips	WD_TR	0.00	3,930.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																2.2300e-003
Energy																1,035.4259
Mobile																6,237.2267
Waste																244.9935
Water																53.5355
Total																7,571.1837

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr						
Area																	2.2300e-003
Energy																	1,035.4259
Mobile																	6,237.2267
Waste																	57.8185
Water																	53.5355
Total																	7,384.0087

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.47

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																6,237.2267
Unmitigated																6,237.2267

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		
User Defined Commercial	5,966.00	8,592.94	8592.94	15,463,135	15,463,135
User Defined Industrial	3,930.00	5,660.00	5660.00	161,044	161,044
Total	9,896.00	14,252.94	14,252.94	15,624,179	15,624,179

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.32	0.00	0.00	100.00	0.00	100	0	0
User Defined Industrial	0.00	0.00	0.00	0.00	100.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LD11	LD12	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

Supermarket	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Commercial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Industrial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																887.8104
Electricity Unmitigated																887.8104
NaturalGas Mitigated																147.6154
NaturalGas Unmitigated																147.6154

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru Supermarket	924042																49.6034
	1.82583e+006																98.0120
User Defined Commercial	0																0.0000
User Defined Industrial	0																0.0000
Total																	147.6154

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru Supermarket	924042																49.6034
	1.82583e+006																98.0120
User Defined Commercial	0																0.0000

User Defined Industrial	0																0.0000
Total																	147.6154

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	190526				50.7735
Supermarket	3.14095e+006				837.0370
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					887.8104

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	190526				50.7735
Supermarket	3.14095e+006				837.0370
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					887.8104

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2.2300e-003
Unmitigated																2.2300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.2300e-003
Total																2.2300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																2.2300e-003
Total																2.2300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				53.5355
Unmitigated				53.5355

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Fast Food Restaurant with Drive-Thru	1.19592 / 0.0763355			6.0037
Supermarket	9.6556 / 0.298627			47.5318
User Defined Commercial	0 / 0			0.0000
User Defined Industrial	0 / 0			0.0000
Total				53.5355

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive-Thru	1.19592 / 0.0763355				6.0037
Supermarket	9.6556 / 0.298627				47.5318
User Defined Commercial	0 / 0				0.0000
User Defined Industrial	0 / 0				0.0000
Total					53.5355

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				57.8185
Unmitigated				244.9935

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive-Thru	45.38				22.8217
Supermarket	441.78				222.1718

User Defined Commercial	0			0.0000
User Defined Industrial	0			0.0000
Total				244.9935

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	10.7097				5.3859
Supermarket	104.26				52.4326
User Defined Commercial	0				0.0000
User Defined Industrial	0				0.0000
Total					57.8185

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Sunset and Western - Project Operations (2026) No MXD - South Coast Air Basin, Annual

Sunset and Western - Project Operations (2026) No MXD
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	1,419.00	Space	12.77	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	11.85	787,250.00	2102
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3
Regional Shopping Center	26.00	1000sqft	0.60	26,000.00	0
Supermarket	69.00	1000sqft	1.58	69,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11	Operational Year	2026		
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	585	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2026

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - see assumptions

Woodstoves - No wood burning hearths

Energy Use - see assumptions (Parking Structure Energy Usage)

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - see assumptions

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Emergency Generators and Fire Pumps EF - SCAQMD BACT Requirements

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	3.92	0.46

tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	585
tblStationaryGeneratorsPumpsEF	NOX_EF	2.85	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblVehicleTrips	CC_TL	8.40	6.10
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	4.98	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	18,113.45
tblVehicleTrips	ST_TR	0.00	4,125.00
tblVehicleTrips	SU_TR	3.65	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	18,113.45
tblVehicleTrips	SU_TR	0.00	4,125.00
tblVehicleTrips	WD_TR	4.20	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	12,576.00
tblVehicleTrips	WD_TR	0.00	2,864.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																248.5519
Energy																2,366.3446
Mobile																12,223.7399
Stationary																1.6050

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Waste																379.4694
Water																375.4094
Total																15,595.1201

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																172.7473
Energy																2,324.1514
Mobile																12,223.7399
Stationary																1.6050
Waste																89.5548
Water																375.4094
Total																15,187.2077

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																12,223.7399
Unmitigated																12,223.7399

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		

User Defined Commercial	12,576.00	18,113.45	18113.45	31,440,560	31,440,560
User Defined Residential	2,864.00	4,125.00	4125.00	117,364	117,364
Total	15,440.00	22,238.45	22,238.45	31,557,924	31,557,924

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.10	0.00	0.00	100.00	0.00	100	0	0
User Defined Residential	0.00	0.00	0.00	100.00	0.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Enclosed Parking with Elevator	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Regional Shopping Center	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Supermarket	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Commercial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Residential	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										M1/yr					
Electricity Mitigated																1,897.5632
Electricity Unmitigated																1,918.6499
NaturalGas Mitigated																426.5882
NaturalGas Unmitigated																447.6947

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										M1/yr					
Apartments High Rise	6.77445e+006																363.6588

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Enclosed Parking with Elevator	0																	0.0000
Regional Shopping Center	42640																	2.2890
Supermarket	1.52283e+006																	81.7469
User Defined Commercial	0																	0.0000
User Defined Residential	0																	0.0000
Total																		447.6946

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	6.45208e+006																346.3538
Enclosed Parking with Elevator	0																0.0000
Regional Shopping Center	39650																2.1285
Supermarket	1.455e+006																78.1059
User Defined Commercial	0																0.0000
User Defined Residential	0																0.0000
Total																	426.5882

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.91066e+006				775.6656
Enclosed Parking with Elevator	1.36224e+006				363.0253
Regional Shopping Center	351000				93.5385
Supermarket	2.57577e+006				686.4206
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					1,918.6499

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.89857e+006				772.4427
Enclosed Parking with Elevator	1.33613e+006				356.0673
Regional Shopping Center	340574				90.7601
Supermarket	2.54527e+006				678.2931
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					1,897.5632

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																172.7473
Unmitigated																248.5519

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																235.8167
Landscaping																12.7352
Total																248.5519

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																160.0121
Landscaping																12.7352
Total																172.7473

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				375.4094
Unmitigated				375.4094

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	47.8882 / 30.1904				320.7402
Enclosed Parking with Elevator	0 / 0				0.0000
Regional Shopping Center	1.92589 / 1.18038				12.7990
Supermarket	8.50551 / 0.263057				41.8702
User Defined Commercial	0 / 0				0.0000
User Defined Residential	0 / 0				0.0000
Total					375.4094

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr		
Apartments High Rise	47.8882 / 30.1904			320.7402
Enclosed Parking with Elevator	0 / 0			0.0000
Regional Shopping Center	1.92589 / 1.18038			12.7990
Supermarket	8.50551 / 0.263057			41.8702
User Defined Commercial	0 / 0			0.0000
User Defined Residential	0 / 0			0.0000
Total				375.4094

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				89.5548
Unmitigated				379.4694

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	338.1				170.0310
Enclosed Parking with Elevator	0				0.0000
Regional Shopping Center	27.3				13.7292
Supermarket	389.16				195.7092
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					379.4694

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	79.7916				40.1273
Enclosed Parking with Elevator	0				0.0000
Regional Shopping Center	6.4428				3.2401
Supermarket	91.8418				46.1874
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					89.5548

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	350	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (200 - 200 HP)																1.6050
Total																1.6050

11.0 Vegetation

Sunset and Western - Project Operations (2026) - South Coast Air Basin, Annual

Sunset and Western - Project Operations (2026)
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	1,419.00	Space	12.77	567,600.00	0
Apartments High Rise	735.00	Dwelling Unit	11.85	787,250.00	2102
User Defined Residential	1.00	Dwelling Unit	0.00	0.00	3
Regional Shopping Center	26.00	1000sqft	0.60	26,000.00	0
Supermarket	69.00	1000sqft	1.58	69,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11	Operational Year	2026		
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	585	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP CO2 Intensity Factor Interolated for Year 2026

Land Use - see assumptions

Construction Phase - see construction assumptions

Off-road Equipment -

Off-road Equipment - see construction assumptions

Trips and VMT - see construction assumptions

Demolition -

Grading - see construction assumptions

Vehicle Trips - see assumptions

Woodstoves - No wood burning hearths

Energy Use - see assumptions (Parking Structure Energy Usage)

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - see assumptions

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Emergency Generators and Fire Pumps EF - SCAQMD BACT Requirements

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	3.92	0.46

tblLandUse	LandUseSquareFeet	735,000.00	787,250.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	585
tblStationaryGeneratorsPumpsEF	NOX_EF	2.85	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblVehicleTrips	CC_TL	8.40	6.28
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	4.98	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	ST_TR	177.59	0.00
tblVehicleTrips	ST_TR	0.00	12,465.96
tblVehicleTrips	ST_TR	0.00	4,125.00
tblVehicleTrips	SU_TR	3.65	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	SU_TR	166.44	0.00
tblVehicleTrips	SU_TR	0.00	12,465.96
tblVehicleTrips	SU_TR	0.00	4,125.00
tblVehicleTrips	WD_TR	4.20	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblVehicleTrips	WD_TR	102.24	0.00
tblVehicleTrips	WD_TR	0.00	8,655.00
tblVehicleTrips	WD_TR	0.00	2,864.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																248.5519
Energy																2,366.3446
Mobile																8,718.5087
Stationary																1.6050

Waste																	379.4694
Water																	375.4094
Total																	12,089.8890

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																172.7473
Energy																2,178.5079
Mobile																8,718.5087
Stationary																1.6050
Waste																89.5548
Water																300.3275
Total																11,461.2512

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.20

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																8,718.5087
Unmitigated																8,718.5087

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Supermarket	0.00	0.00	0.00		

User Defined Commercial	8,655.00	12,465.96	12465.96	22,271,028	22,271,028
User Defined Residential	2,864.00	4,125.00	4125.00	117,364	117,364
Total	11,519.00	16,590.96	16,590.96	22,388,392	22,388,392

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36
User Defined Commercial	0.00	6.28	0.00	0.00	100.00	0.00	100	0	0
User Defined Residential	0.00	0.00	0.00	100.00	0.00	0.00	0	0	100

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Enclosed Parking with Elevator	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Regional Shopping Center	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
Supermarket	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Commercial	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811
User Defined Residential	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										M1/yr					
Electricity Mitigated																1,751.9197
Electricity Unmitigated																1,918.6499
NaturalGas Mitigated																426.5882
NaturalGas Unmitigated																447.6947

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										M1/yr					

Apartments High Rise	6.77445e+006																363.6588
Enclosed Parking with Elevator	0																0.0000
Regional Shopping Center	42640																2.2890
Supermarket	1.52283e+006																81.7469
User Defined Commercial	0																0.0000
User Defined Residential	0																0.0000
Total																	447.6946

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	6.45208e+006																346.3538
Enclosed Parking with Elevator	0																0.0000
Regional Shopping Center	39650																2.1285
Supermarket	1.455e+006																78.1059
User Defined Commercial	0																0.0000
User Defined Residential	0																0.0000
Total																	426.5882

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.91066e+006				775.6656
Enclosed Parking with Elevator	1.36224e+006				363.0253
Regional Shopping Center	351000				93.5385
Supermarket	2.57577e+006				686.4206
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					1,918.6499

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.76233e+006				736.1360
Enclosed Parking with Elevator	1.08781e+006				289.8908
Regional Shopping Center	299884				79.9165
Supermarket	2.424e+006				645.9764
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					1,751.9197

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																172.7473
Unmitigated																248.5519

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																235.8167
Landscaping																12.7352
Total																248.5519

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																160.0121
Landscaping																12.7352
Total																172.7473

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				300.3275
Unmitigated				375.4094

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	47.8882 / 30.1904				320.7402
Enclosed Parking with Elevator	0 / 0				0.0000
Regional Shopping Center	1.92589 / 1.18038				12.7990
Supermarket	8.50551 / 0.263057				41.8702
User Defined Commercial	0 / 0				0.0000
User Defined Residential	0 / 0				0.0000
Total					375.4094

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	38.3106 / 24.1523				256.5922
Enclosed Parking with Elevator	0 / 0				0.0000
Regional Shopping Center	1.54071 / 0.944305				10.2392
Supermarket	6.80441 / 0.210446				33.4962
User Defined Commercial	0 / 0				0.0000
User Defined Residential	0 / 0				0.0000
Total					300.3275

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				89.5548
Unmitigated				379.4694

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	338.1				170.0310
Enclosed Parking with Elevator	0				0.0000
Regional Shopping Center	27.3				13.7292
Supermarket	389.16				195.7092
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					379.4694

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	79.7916				40.1273
Enclosed Parking with Elevator	0				0.0000
Regional Shopping Center	6.4428				3.2401
Supermarket	91.8418				46.1874
User Defined Commercial	0				0.0000
User Defined Residential	0				0.0000
Total					89.5548

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	350	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (200 - 250 HP)																1.6050
Total																1.6050

11.0 Vegetation